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**CHALLENGE TB**



**Challenge TB – Mozambique**

**Year 1**

**Annual Report**

**October 1, 2014 – September 30, 2015**

**October 30, 2015**

**Cover photo:**

A certificate of Merit issued to CTB Lab Technical Officer (TO) by the Ministry of Health as an acknowledgement of her contribution to the National Reference Laboratory (NRL) on biosafety and bio security during the accreditation process by IPAC (Intituto de Português para Acreditação/National Portuguese Institute for Accreditation)

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## List of Abbreviations and Acronyms

AFB	Acid Fast Bacilli
ADPP	Ajuda de Desenvolvimento de Povo para Povo
AMOFEDA	Associação Moçambicana para Desenvolvimento da Famílias
BRRL	Beira Regional Reference Laboratory
CB-DOTS	Community Based DOTS
CCR	Children at Risk
CDC	Center for Disease Control and Prevention
CHW	Community Healthcare Worker
CMAM	Central Medical Stores
CTB	Challenge TB
DFB	Damien Foundation Belgium
DOT	Directly Observed Treatment
DSP	Provincial Directorate of Health
DST	Drug Susceptibility Testing
DQA	Data Quality Assessment
ER+R	Electronic Reporting and Recording
EQA	External Quality Assessment
FAST	<u>F</u> inding <u>A</u> ctively TB and MDR-TB cases, <u>S</u> eparating safely and <u>T</u> reating effectively
FDC	Fundo de Desenvolvimento Comunitario
FHI	Family Health International
GF	Global Fund
GLI	Global Laboratory Initiative
HIV	Human Immunodeficiency Virus
TB-IC	TB Infection Control
IEC	Information, Education and Communication
IPAC	National Portuguese Institute for Accreditation
KNCV	KNCV Tuberculosis Foundation
MCHN	Maternal Child Health Nurse
MDR-TB	Multi Drug Resistant TB
M&E	Monitoring and Evaluation
MOH	Ministry of Health
NTP	National Tuberculosis Control Program
NRL	National Reference Laboratory
NRRL	Nampula Regional Reference Laboratory
PCA	Patient Centered Approach
PMDT	Programmatic Management of Drug-resistant Tuberculosis
RRL	Regional Reference Laboratory
SERNAP	National Prisons Service
SNL	Supra National Laboratory
TA	Technical Assistance
TB	Tuberculosis
TB CAP	Tuberculosis Control Assistance Program
TO	Technical Officer
TOT	Training of Trainers
TWG	Technical Working Group
USAID	United States Agency for International Development
XDR-TB	Extensively Drug Resistant TB
WHO	World Health Organization

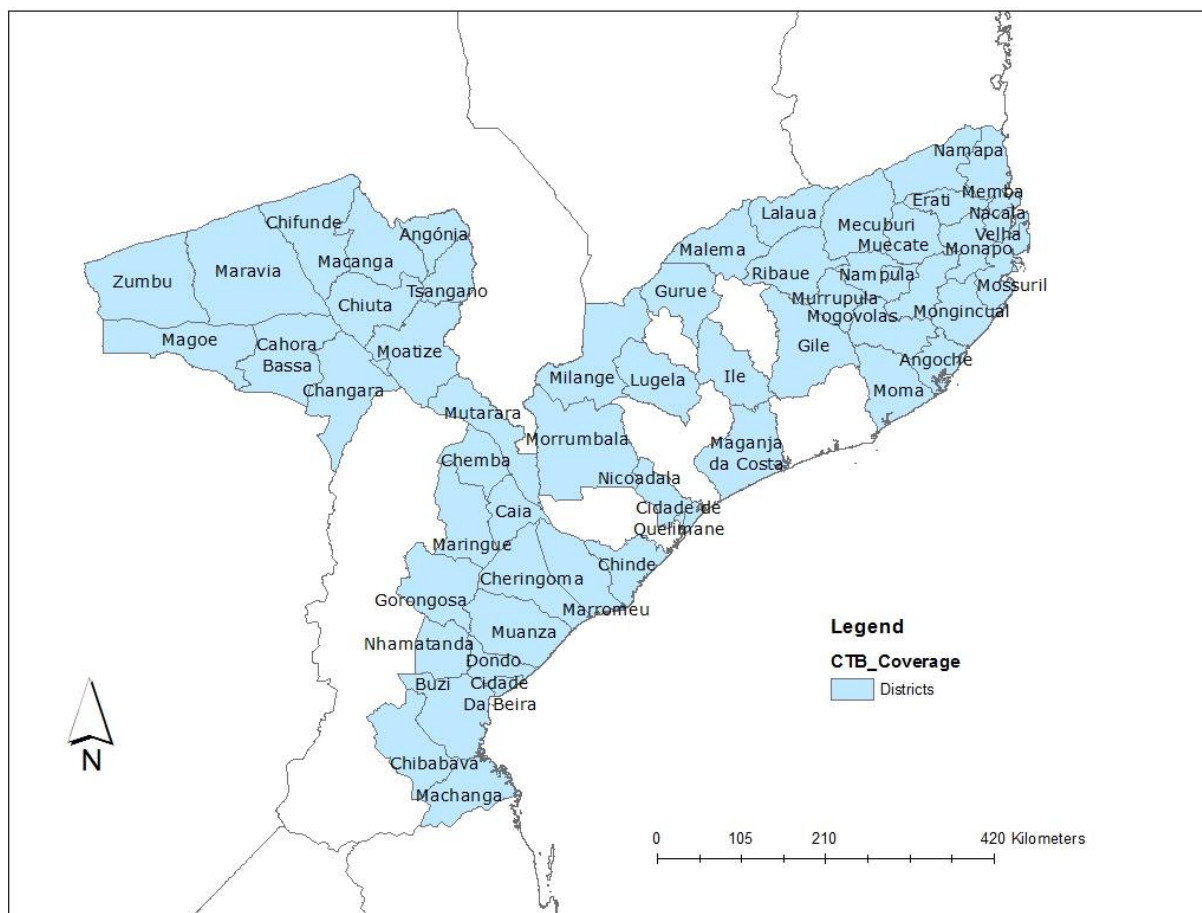
## **1. Executive Summary**

Challenge TB (CTB) is a five year global United States Agency for International Development (USAID)-funded project implemented by the CTB partnership with KNCV Tuberculosis Foundation (KNCV) as the prime. The project builds and expands upon previous USAID tuberculosis (TB) prevention and treatment efforts. The implementation of CTB in Mozambique is led by FHI 360 with KNCV as the only coalition partner. As the lead partner for the CTB project in Mozambique, FHI 360 provides technical leadership to the project, ensuring coordination, management and monitoring of the project activities at the country level. FHI 360 maintains a close working relationship with the National Tuberculosis Program (NTP), USAID, other relevant departments of the Mozambique Ministry of Health (MOH), KNCV, and other collaborating partners (including civil society organizations) to ensure agreed upon project activities are implemented in line with the NTP national strategic plan 2014–2018, and in accordance with established standards.

The CTB project will be implemented from 2015 to 2019 and APA 1 was in fact only implemented over a 6-month period between April–September 2015 due to the delay in approval of CTB Year 1 work plan. As part of the Year 1 scope of work, the project focused on technical assistance to the NTP at central and provincial levels as well as: training health professionals on Multidrug Resistant Tuberculosis (MDR-TB) and pediatric TB, laboratory interventions at the central, provincial, district and health facilities levels, strengthening the health systems for TB care, and monitoring and evaluation with the objective of strengthening the national reference laboratory (NRL) and NTP M&E systems.

The project has received support from the NTP (National, provincial and districts levels) to implement CB DOTS in 64 districts across 4 provinces of Nampula, Zambezia, Sofala and Tete in the Northern Central regions of the country (Figure 1). In total, CTB will cover 64 out of 74 (86%) districts in the four provinces over the course of the project (in Zambézia province, Friends in Global Health (FGH) is already covering 10 districts with CB DOTS activities). The implementation of CB DOTS will commence in Year 2 once the sub-awards process is completed and contracts are signed with the six selected implementing partners.

**Figure 1: Map Showing CTB Districts**



Given the short time frame for Year 1 implementation, the project team prioritized activities that would bear fruit over the next 4 years of the CTB project, and also key TA activities that did not require completion of contracts with our community partners. The latter became important when we encountered more stringent FHI 360 contracting requirements compared to those under TB CARE I. These contracts are still being finalized, such that we will need to make up for lost time in APA 2–5 for CB-DOTS activities.

Challenge TB Mozambique has steadily solidified its activities in APA1 despite a slow start with more than 6 months before the approval of the annual workplan. During the third quarter of APA 1, CTB activities in Mozambique were officially launched at the central and provincial levels in coordination with and support from the National and provincial TB programs, and with participation from NTP and key stakeholders and partners.

For the reporting period, key achievements included the accreditation in March 2015 of the NRL under ISO15189 particularly on Biosafety and Biosecurity. The accreditation process began in 2011 with FHI 360 playing a significant role by supporting rehabilitation and modernization of the lab under Tuberculosis Control Assistance Program (TB CAP).

CTB mapped microscopic laboratories in all target provinces and has identified those districts most in need of support based on distance to health facilities and low population coverage.

Likewise, an assessment of the sample transportation system in Zambezia province identified the challenges faced by peripheral health facilities in transporting sample to districts and provincial lab. As a result of this exercise, CTB has identified two models that will be piloted to identify efficient and effective transport.

## 2. Introduction

CTB in Mozambique is supporting NTP's efforts on case detection through community engagement activities, high quality diagnostics, high quality of care for all categories of patients (TB, TB/HIV, MDR-TB and pediatric TB), strengthening the TB surveillance system, and supporting the first national TB prevalence survey in Mozambique. CTB activities were developed to align with the NTP National Strategic Plan (NSP) 2014–2018. In Year 1 NTP and CTB carried out a gap analysis in order to identify gaps in the implementation of activities funded by the Global Fund (GF), ensuring synergies to leverage funding and support the NTP.

CTB will continue to build on successful approaches that were implemented under TB CARE I and/or other projects, and apply innovative strategies and new tools to support MOH efforts to prevent the further spread of susceptible TB and drug-resistant TB, to accelerate case detection, and to improve the treatment of cases. As with TB CARE I, CTB will take an integrated approach in supporting NTP activities with coordination and collaboration to be strengthened in working with partners at national as well as at provincial level in implementation of community activities. The project will continue to draw from existing HIV and TB CAP/CARE toolkits, and will focus on TB, TB/HIV, and other important health problems. Technical assistance will be provided to MOH at central, provincial and district level and to the CB-DOTS implementing partners in order to facilitate the implementation of national policies related to TB/HIV collaborative activities. CTB is supporting 10 major technical areas as listed in Table 1 below, the sub-objective 8 is not addressed by CTB.

In terms of TB/HIV collaborative activities, the project has actively participated in TB/HIV task force technical meetings along with the NTP and other partners and coordinated the implementation of TB/HIV collaborative activities.

**Table 1: CTB Technical Areas by Objective**

<b>Objective 1. Improved access to quality patient centered care for TB, TB/HIV and MDR-TB services</b>	
<b>Sub objectives</b>	1. Enabling environment
	2. Comprehensive, high quality diagnostic network
	3. Patient-centered care and treatment
<b>Objective 2: Prevention of transmission and disease progression</b>	
<b>Sub objectives</b>	4. Targeted screening for active TB
	5. Infection control
	6. Management of latent TB infection
<b>Objective 3: Strengthened TB platforms</b>	
<b>Sub objectives</b>	7. Political commitment and leadership
	8. Comprehensive partnerships and informed community involvement*
	9. Drug and commodity management systems*
	10. Quality data, surveillance and M&E
	11. Human resource development
	12. Technical supervision

CTB Implementing Agencies

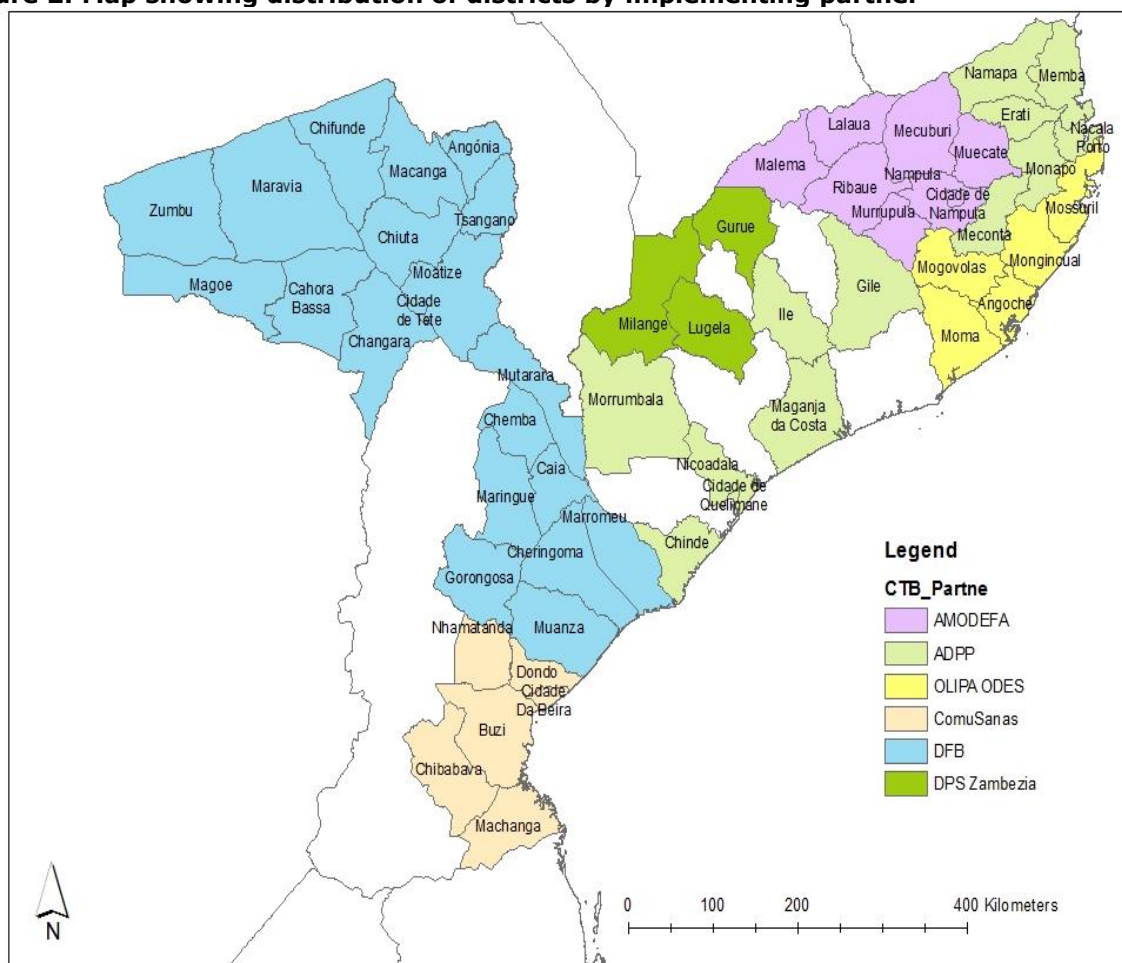
Although CTB aimed to start CB DOTS implementation in Year 1, the sub award process was not complete. However, the four provinces and 64 districts (out of 74 in the four provinces) where



implementation will take place were selected and the local implementing agencies that will work in each district identified (Figure 2). The six implementing agencies were selected, out of 34 local non-governmental organizations that submitted proposals, through a competitive processes implemented by FHI 360 in collaboration with NTP and the provincial directorates of health. CTB is currently finalizing the sub-awards with the implementing agencies and work will begin in Year 2. In total, CTB will cover 42% (64/151) of all districts in the country and 70% of the national population (13,988,164/20,000,000).

In provinces where FHI 360 has other projects, CTB has collaborated with these projects in order to leverage resources. Key areas for collaboration include TB/HIV, nutrition, specimen transportation, and community activities in Sofala and Tete where FHI 360 has active community projects.

**Figure 2: Map showing distribution of districts by implementing partner\***



\*Districts in white are those covered by FGH in Zambezia.

Legend CTB Implementing partners

AMODEFA: - Associação Moçambicana para Desenvolvimento da Família

ADPP: - Agência para Desenvolvimento de Povo para Povo

ComuSanas (not abbreviated)

DFB: - Damien Foundation Belgium

DPS: - Direcção Provincial de Saúde

OLIPA ODES (not abbreviated)

### 3. Country Achievements by Objective/Sub-Objective

#### Objective 1. Improved Access

##### Sub-objective 1. Enabling environment

In APA 1, CTB consolidated and realigned the CB-DOTS strategy, revising the manual to be used for training community healthcare workers (CHW). Information, Education Communication (IEC) materials, especially the TB essential information flyers, were reviewed, updated, printed and distributed during the World TB Day commemorative activities at national and provincial levels.

#### Key Results

CTB collaborated with NTP and the HIV program to review and update IEC materials (flyers) on TB and TB/HIV. The updated materials were approved by the NTP and CTB supported printing and distribution of 3,000 copies which were used in advocacy campaigns and awareness programs that extended to prisons.

**Figure 3: Examples of Revised IEC Materials**



CTB, in collaboration with the NTP and other partners supporting the NTP, has completed the revision of the CB-DOTS manual. New components such as the Patient Centered Approach (PCA), Community Infection Control (CIC) strategies and infection control for community health workers (CHWs), FAST, Cough days, Nutrition, and Contact tracing have been added to ensure a comprehensive approach to CB-DOTS services.

One of the PCA tools, the TB literacy tool kit, is being revised. The included teaching job aid (the story of Tomas) is being updated with additional important aspects of TB such as infection control and MDR-TB. The teaching aid will be a teaching tool for CHW.

Targets and results of sub-objective 1.1 are shown in Table 2 below:

**Table 2: Tracking of Sub-objective 1. Enabling environment**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
1.2.1	# of current/ex-TB patient groups engaged at the community level and also linked with the NTP	<b>Description:</b> Number of current/ex-TB patient groups engaged at the community level and also linked with the NTP <b>Indicator Value:</b> Number <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of current/ex-TB patient groups engaged at the community level and also linked with the NTP	0 N/A	4	0 Jan to Sept 2015 This was not achieved as it is linked to community activities that are yet to take place. CTB will implement this in APA 2
1.4.1	One or more components of the patient-centered approach are adopted into routine practice/policy	<b>Description:</b> One or more components of the patient-centered approach (i.e., universal access, consider patient needs, respect rights, provide quality care, establish trust, participate in process, and empower involvement) are adopted into routine practice/ policy <b>Indicator Value:</b> Yes/No <b>Level:</b> National	Yes Annual data 2014	Yes	Yes, Jan to Sept 2015  see text for description of updated IEC materials for TB and TB/HIV that have been approved by NTP, printed and distributed, including to prisons

**Sub-objective 2. Comprehensive, high quality diagnostics**

The project, in close coordination with the NTP's Lab Section, completed mapping of laboratory coverage in each target province. We then identified and prioritized health facilities that need support for providing sputum-smear microscopy services. To reinforce accurate and reliable direct Acid Fast Bacilli (AFB) microscopy examination, CTB provided technical assistance on blind rechecking exercise in 4 CTB provinces as part of its APA 1 activities. The blind rechecking exercise consisted of re-reading of slides by a different lab technician from another district to calculate the degree of concordance and the quality of the smears. This was done in Zambézia, Sofala and Tete provinces. In Nampula province, slides were sent to the Nampula regional reference lab for re-reading and results (% of concordance and quality of smears) sent back to the districts. The districts with high rates of discordance were identified and supportive supervision visits conducted to strengthen the skills of the lab technicians. CTB also supported an annual visit from an expert from the Supra National Laboratory (SNL) Milan (Enrico Tortolli) to carry out technical assistance for the Maputo and Beira reference lab. The panel test were sent in December last year and for this year according to Milan SRL will be send by the end of November.

## Key Results

In APA 1, CTB completed the mapping of microscopic laboratories in all CTB target provinces with support from NTP. The objective of the exercise was to increase laboratory diagnosis of TB by identifying priority health facilities that need microscopy coverage.

The mapping of CTB district microscopic coverage has shown that in Milange district of Zambezia Province, there is one microscopy center that caters to a population of 463,759, while in Sofala Province, one microscopy center serves a population of 73,167. Nearly 87% of districts in Tete province have more than one functioning microscopy center, however, the majority of patients seeking laboratory services have to walk up to 60 kilometers to access a health facility with laboratory services. In Nampula province patients have to travel for more than 95 kilometers to access lab services. Sites identified for microscopic lab network expansion as a result of the mapping exercise include districts with coverage of between 85,449 to 463,759 populations per laboratory, namely Milange in Zambezia province, Larde in Nampula province, Tsangano in Tete Province, and Nhamatanda in Sofala province. Targeted interventions will start in APA2. In terms of GeneXpert coverage, Nampula province is least covered with a ratio of 1/1,200,000 inhabitants while Sofala province showed better coverage with a ratio of 1/400,000. Accepted coverage is 1/500,000 inhabitants which means that three CTB provinces were insufficiently covered. The mapping result generally showed that the urban districts have better coverage compared to rural districts. These results, especially the prioritization, will be used by CTB to develop its implementation plan, ensuring that those districts with the worst coverage are addressed first. The exercise also gave the project a better understanding of the coverage of the microscopy network.

CTB carried out an assessment of the lab sample transport system in Zambézia province to identify districts with specimen transportation challenges from peripheral health facilities to the district/provincial level Lab network. Zambézia was prioritized for the initial assessment based on population size, limited microscopic lab coverage, and a weak specimen transportation system, which is worsened by long distances between diagnostic centers and peripheral health facilities. The objective of the exercise is to identify transport systems that will efficiently and effectively transport samples from peripheral health services to district/province level to guarantee early diagnosis and treatment of presumptive TB and MDR-TB cases. Upon completion of the assessment, two models will be implemented as of Year 2 which will include; 1) procurement of motorbikes and integrating their use as part of CB-DOTS implementing agencies routine activities and 2) integrating of specimen transportation system into other clinical projects that are also supporting transportation of samples.

The CTB lab technical officer (TO) supported the revision and finalization of the Laboratory (microscopy and Xpert) Register and the sample referral protocol. This revision will enable the tracking of national lab indicators.

The CTB lab officer received a merit certificate from MOH for contributing to the NRL accreditation process. The recognition is of importance as it is one of the highest individual merit awards to individuals in the lab area. With this recognition, the CTB Lab officer is now a recognized expert in provision of technical assistance for TB reference laboratories functioning in the country, especially on bio-safety and bio-security. Also, the experience she acquired during the process will be useful in assisting not only the reference lab functioning but also microscopic lab network functioning in order to achieve the 11 Global Laboratory Initiative (GLI) standards for accreditation in the CTB target provinces.

CTB participated in lab supportive supervision visits in its four target provinces with 18 laboratories out of 60 in 16 districts visited. The main findings were: i) weak biosafety measures; ii) discrepancies in some results of high false positive and high false negative and; iii) lack of standardized technical procedures which resulted in a proposal to update/develop a Biosafety, External Quality Assessment (EQA) and update microscopy manuals in Year 2.

CTB, in coordination with the NRL, organized a visit from a technician from the Milan Supra National Reference Lab. The expert provided technical assistance to the NRL and Beira regional reference labs to improve lab quality management.

Targets and results under sub-objective 2 are shown in Table 3 below.

**Table 3: Tracking of Sub-objective 2. Comprehensive, high quality diagnostics**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
2.1.1	# of laboratories performing microscopy (stratified by LED florescence, Ziehl-Neelsen)	Description: Number of laboratories performing microscopy (stratified by LED florescence, Ziehl-Neelsen) Indicator Value: Number Level: National and Challenge TB geographic areas Numerator: Number of laboratories performing microscopy (stratified by LED florescence, Ziehl-Neelsen)	62 (procured by TB CARE I) 2014 annual data	5/5 (100%)new sites identified for microscopie expansion	4 sites identified for microscopy network expansion: Nampula-Larde district; Sofala-Nhamatanda district; Tete-Tsangano district & Zambézia-Milange district. Jan to Sept 2015)  Currently in the 4 CTB provinces the number of functional laboratories performing either LED-FM or ZN examinations is as follows:  <b>Nampula:</b> 56 (12 LED/ 44 ZN) <b>Sofala:</b> 28 (11 LED/ 17 ZN) <b>Tete:</b> 40 (5 LED/ 35 ZN) <b>Zambézia:</b> 54 (9 LED/ 45 ZN)
2.1.2	A current TB lab strategic plan with complete regional mapping of diagnostic services at each level exists [Y/N]	Description: The country has a current TB lab strategic plan with complete regional mapping of diagnostic services at each level. Note that this measurement requires operations research using a valid tool. Indicator Value: Yes/No Level: National"	No	No	USAID mandatory indicator – not in Year 1 work plan, but measured at the end of Year 1  The TB Lab strategic plan, which includes an operational plan, was developed with support from TB CARE I, in APA 1. CTB is working the National Department of Laboratories to have the plan integrated into the National plan. The national Lab SP is in process of budget revision prior to submission for approval.
2.2.1	#/% of laboratories enrolled in EQA for smear microscopy	<b>Description:</b> Proportion of laboratories enrolled in External Quality Assessment for smear microscopy <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of laboratories enrolled in EQA for smear microscopy <b>Denominator:</b> Total number of laboratories performing smear microscopy	59.4 % 138/232  (TB CARE I 5 provinces of Gaza, Sofala, Nampula, Zambézia and Tete) Annual data 2014	75% 131/175  (CTB 4 target provinces)	71% (124/175)  Jan to Sept 2015  Nampula 16/56 (29%) Sofala 28/28 (100%) Tete 36/39 (92%) Zambézia 44/52 (84%)  Nampula recorded the lowest percentage of laboratories participating in EQA as many of the labs did not send fixed slides for control due to transport constraints. CTB in Year 2 will support in a 2 day workshop in each target province where participation of all labs will be mandatory.

2.2.2	#/% of laboratories showing adequate performance in external quality assurance for smear microscopy	<p><b>Description:</b> Performance of EQA is just as important as having EQA established. This indicator measures the percent of laboratories enrolled in EQA for smear microscopy that successfully passed EQA in the last reporting period.</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Number of laboratories that successfully passed EQA for smear microscopy</p> <p><b>Denominator:</b> Total number of laboratories enrolled in EQA for smear microscopy</p>	<p>67% 93/138</p> <p>(TB CARE I 5 provinces of Gaza, Sofala, Nampula, Zambézia and Tete)</p> <p>Annual data 2014</p>	<p>80 % (105/131)</p>	<p>83/124 (70%) Jan to Sept 2015</p> <p>Nampula 8/16 (50%) Sofala 22/28 (79%) Tete 23/36 (64%) Zambézia 30/44 (68%)</p>
2.2.3	#/% of laboratories enrolled in EQA for culture/DST	<p><b>Description:</b> Proportion of laboratories enrolled in EQA for culture/DST</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Number of laboratories enrolled in EQA for culture/DST</p> <p><b>Denominator:</b> Total number of all laboratories performing culture/DST</p>	<p>3</p> <p>Annual data 2014</p>	<p>3</p> <p>(Nampula 1; Sofala 1; Maputo 1)</p>	<p>2</p> <p>Jan to Sept 2015</p> <p>Maputo NRL (culture and DST)</p> <p>Nampula regional reference lab (culture)</p> <p>Sofala (Beira) lab was dysfunctional due to recurrent power cuts from the national grid.</p>
2.2.4	#/% of laboratories showing adequate performance in external quality assurance for DST	<p><b>Description:</b> Performance of EQA is just as important as having EQA established. This indicator measures the percent of laboratories enrolled in EQA for culture/DST that successfully passed EQA in the last reporting period.</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Number of laboratories that successfully passed EQA for culture/DST</p> <p><b>Denominator:</b> Total number of all laboratories enrolled in EQA for culture/DST</p>	<p>2</p> <p>Annual data 2014</p>	<p>3</p>	<p>33% (1/3)</p> <p>Jan to Sept 2015</p> <p>Maputo NRL is the only lab enrolled for EQA for culture and DST in APA 1, and had 100% of adequate performance for both.</p> <p>In APA1 Nampula regional reference lab NRRL was enrolled only in culture panel and has 50% of inadequate performance.</p> <p>Sofala (Beira) hadn't enrolled in Culture/ DST as they were facing problem with electricity</p>

2.2.6.	% of national reference laboratories implementing a quality management system according to international standards (GF)	<p><b>Description:</b> This indicator measures the percentage of TB reference laboratories in the country that are implementing a quality management system for continuous improvement of all aspects of laboratory operations to assure accuracy and reliability of testing, disaggregated by national and intermediate levels. Provide a score/rating for every reference laboratory implementing LQMS, either the GLI Stepwise Process towards TB Laboratory Accreditation" (scoring = phase 1-4) or SLIPTA/SLMTA for TB (scoring=stars 1-5).</p> <p><b>Indicator value:</b> Number and percent (Reference: Laboratory Quality Management Systems Handbook; <a href="http://www.who.int/ihr/publications/lqms/en/">http://www.who.int/ihr/publications/lqms/en/</a>)</p> <p><b>Numerator:</b> Number of TB reference laboratories implementing a quality improvement program</p> <p><b>Denominator:</b> Total number of TB reference laboratories in the country</p> <p><b>Level:</b> National and/or Intermediate</p>	100% (3/3) annual data 2014  Maputo NRL - Accredited March 2015 Nampula RL - 0 star Beira RL - 0 star	100% (3/3)  Maputo NRL - Accredited Nampula RL - 0 star Beira RL - 0 star	<p>100% (3/3) Jan to Sept 2015</p> <p>All the 3 country reference laboratories are implementing a quality management system according to international standards. National Reference Laboratory (NRL) is accredited by IPAC (Intituto de Português para Acreditação/National Portuguese Institute for Accreditation).</p> <p>Sofala (Beira) and Nampula reference labs are also implementing and following a step-wise plan for a TB laboratory quality management system towards accreditation.</p> <p>USAID mandatory indicator</p>
2.2.7	AFB microscopy network is quality-assured according to international standards (i.e. the GLI "TB Microscopy Network Accreditation" tool)	<p><b>Description:</b> This indicator measures whether or not a country has met the 11 GLI-approved standards for the TB microscopy network. A CTB checklist is provided to assess fulfilment of the requirements for each standard. Identify numerically (1-11) which standard(s) have been met. (Reference: "TB Microscopy Network Accreditation: an assessment tool"; <a href="http://www.who.int/tb/laboratory/microscopy-network-accreditation-assessment-tool.pdf">http://www.who.int/tb/laboratory/microscopy-network-accreditation-assessment-tool.pdf</a>)</p> <p><b>Indicator value:</b> Number</p> <p><b>Numerator:</b> Total number of standards met (NE=not evaluated, 0=no standards have been met).</p>	0 (2014)	0	<p>CTB in coordination with the NTP (head of the microscopy network) used the GLI checklist on July 2015 to evaluate the number of standards; the result showed 0 standards met. This resulted in the development of a workplan in order to address and improve the management of the microscopy network.</p> <p>USAID mandatory indicator</p>

2.3.1	% of confirmed TB cases who undergo DST and receive their results, disaggregated by new and previously treated cases	<p><b>Description:</b> This indicator measures the percentage of bacteriologically confirmed TB cases that are tested for drug resistance and also have results recorded in the TB register (disaggregated by new and previously treated cases). Drug resistance testing includes phenotypic (culture DST) and genotypic (molecular DST by GeneXpert, LPA or other molecular technologies).</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Number of bacteriologically confirmed TB cases that are tested for drug resistance and have results recorded in the TB register.</p> <p><b>Denominator:</b> Total number of bacteriologically confirmed TB cases notified during the reporting period</p>	<p>Nationwide: 3% of new patients (n=634)</p> <p>9% of retreatment patients (n=653)</p> <p>2013</p> <p>N/A (2014)</p>	CTB areas: N/A	<p>National: New cases 2.4% (598/24,430) Previously treated cases 55.3% (852/1,542)</p> <p>CTB provinces: New cases 0.3% (41/13,570) Previously treated cases 11.1% (77/691)</p> <p>Jan to June 2015</p> <p>USAID mandatory indicator</p>
2.4.	# of studies initiated		N/A	1 (reported also under 10.2.4)	On going
2.6.1	Average turnaround time from specimen submission to delivery of result to the patient (stratified by microscopy, Xpert, culture, DST)	<p><b>Description:</b> This indicator measures average turnaround time from specimen collection/ submission to delivery of result to the patient (stratified by microscopy, Xpert, culture, DST). Note that this measurement requires operations research using a valid tool.</p> <p><b>Indicator Value:</b> Number (of days)</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Total number of specimen-days (lapsed from specimen collection/ submission to delivery of result for each specimen)</p>	N/A	<p>N/A</p> <p>2 Provinces data on turnaround time will be available (Zambezia and Tete)</p>	Not achieved as the sample referral has not yet started



<b>2.7.2</b>	# of laboratories with a functional ventilated work station Indicator Value: Number Level: CTB target provinces Source: CTB Report	<b>Description:</b> This indicator measures lab with functional ventilated work station <b>Indicator Value:</b> Number <b>Level:</b> Challenge TB geographic areas Total number of TB labs  <b>Numerator:</b> Number of Lab with functional ventilated work station	<b>N/A</b>	10 labs with functional ventilated work station	Activity cancelled due to high cost
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### Sub-objective 3. Patient-centered care and treatment

There are three areas that CTB focused on during APA 1, related to patient-centered care and treatment: pediatrics, TB in prisons, and MDR-TB. In pediatrics, CTB focused on the Training of Trainers (TOT) on pediatric TB, and cascaded trainings to Maternal Child Health Nurse (MCHN). The aim of these trainings is to strengthen pediatric TB diagnosis, treatment and care at all health facility entry points. The training focuses on strengthening Maternal and Child Health Nurse (MCHN) awareness of TB, especially identification of signs and symptoms, and on guaranteeing that the referral system between the entry points and diagnosis sectors (e.g., TB sector, clinical consultation, consultation of Children in Risk (CCR)) is functional.

Interventions were also planned for the prison population. The prevalence of TB among prisoners is much higher than in the general population and given the conditions under which inmates live there is a need to develop interventions that are patient centered and will address their plight.

CTB in coordination with NTP, NTP partners, and a KNCV consultant started planning a national MDR-TB review and planning workshop on MDR-TB ("Back on track for MDR-TB in Mozambique"). The outcome will be an action plan for the coming years that will address the current poor performance in MDR-TB care and prevention in order to improve testing rates for MDR-TB, the proportion of diagnosed patients who start treatment, and the treatment success rates (TSR) of patients with MDR-TB.

In Year 1 CTB supported TOT trainings on MDR-TB and TB pediatric; cascade training in CTB provinces will continue to be supported by the project. Support will also be provided for supervision visits on MDR-TB and pediatric TB to improve screening and investigation of presumptive cases. Moreover, mini campaigns will be conducted for groups at risk to promote screening.

### Key Results

For Pediatric TB diagnosis and treatment, the CTB pediatric TB Technical Officer supported the pediatric TB Technical Working Group, in reviewing the pediatric TB guidelines and manuals; these have been submitted for approval. CTB also contributed to the updated version of the Mantoux poster which will be included in the manual. CTB also supported the printing of 1,000 copies of the revised guidelines used in pediatric TB trainings. In the first semester (Jan to Sept 2015) of 2015, 3,146 children were diagnosed with TB, representing 10.4 % (3,146/30,217) of newly diagnosed cases. With CTB supported, pediatric training was conducted for MCHN in Tete and Nampula provinces. It is expected that the number of TB cases identified in children will increase.

The project coordinated two TOTs followed by districts cascade trainings on pediatric TB in Nampula and Tete. Out of 384 health care workers identified to be trained in the two provinces, 327 (85% of

the target) were successfully trained, as not all the MCHN were available for training due to competing priorities. The trainees included medical doctors, medical health technicians and MCHN. Trainings in the other provinces (Sofala and Zambézia) are in preparation and will take place in APA 2. Follow up supervision will also take place in Year 2 in the provinces where the training has already been done.

In terms of TB in prisons, CTB successfully brought together National Prisons Service (SERNAP, which is the main government partner), NTP, the national HIV program, and other stakeholders and partners to establish a Technical Working Group (TWG) to improve control on TB and HIV in prisons. The group has already developed a scope of work and scheduled regular meetings on a monthly basis. The group provides technical support to TB/HIV activities in the prisons. Mapping of partners supporting activities in different prisons was completed.

The CTB TO for MDR-TB is a consistent participant in the technical working meetings for MDR-TB. One of the major achievements of the group was presenting to the MOH a revised treatment regimen for the treatment of MDR-TB and Extensively Resistant TB (XDR-TB). Although this is pending ministerial approval, the proposed regimen is currently in use and the drugs have already been included in the National Essential Drug list which was recently approved by the MOH.

In APA 1, CTB supported training of trainers on clinical and operational management of MDR-TB/ XDR-TB, in partnership with GF through technical assistance and cost sharing of the project and the Global Fund, bringing in Prof. José Caminero to facilitate the TOT training. The NTP MDR-TB focal person and the CTB MDR-TB TO co-facilitated the TOT. Thirty-eight health workers from the 11 provinces were trained. Participants included medical doctors, MDR-TB focal points, TB supervisors, and health technicians. By the end of the training, 15 participants were selected to be part of the group of national facilitators for the cascade provincial trainings planned for APA2. Selection was based on performance during the training.

**Table 4: Tracking of Sub-objective 3. Patient-centered care and treatment**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
3.1.1	# of cases notified (all forms)	<p><b>Description:</b> The number of TB cases all forms (i.e. bacteriologically confirmed plus clinically diagnosed, new and relapse) reported by the NTP disaggregated by setting (i.e. private sector, pharmacies, prisons, etc.) and/or population (i.e., gender, children, miners, urban slums, etc.) and/or case finding approach (ICF, ACF, CI). Private sector providers should be described according to context and case finding approach, for example, type of provider targeted (i.e. ,for profit medical clinics, pharmacists, informal providers, private hospitals, etc.)</p> <p><b>Indicator Value:</b> Number and where available, percent</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Number of TB cases all forms (bacteriologically confirmed + clinically diagnosed; includes new and relapse cases) reported (by setting/ population/ case finding approach) nationally and in Challenge TB geographic areas in the past year</p> <p><b>Denominator:</b> Total number of TB cases (all forms) notified nationally and in Challenge TB geographic areas</p>	<p>NTP Annual Report 9.2% of notified patients referred through CB-DOTS</p> <p>National: 56,220 (all forms) (2013)</p> <p>CTB provinces results: 28,253 cases notified (2013?)</p> <p>Referred by community referral system: 4,420 (16%)</p> <p>2014 annual data</p>	<p>CTB areas: 964/28,920 (3%) referred through CB-DOTS Jul to Sept 2015</p>	<p>0% (0/964)</p> <p>CTB will implement this in APA 2</p> <p>July to Sept 2015</p> <p>USAID mandatory indicator</p>
3.1.4	# of MDR-TB cases diagnosed	<p><b>Description:</b> Total number of bacteriologically confirmed MDR-TB cases diagnosed. Project should follow the MDR-TB/Xpert algorithm in country regarding whether Rifampicin-resistant TB cases (RR-TB) should be counted as confirmed MDR-TB. If a country's algorithm states that a RR-TB cases is automatically assumed to be MDR-TB (i.e. no further DST required), then RR-TB should be included in the number of confirmed MDR-TB cases diagnosed. Otherwise, RR-TB should be excluded until proven via further DST that the case is a confirmed MDR-TB case.</p> <p><b>Indicator Value:</b> Number</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Number of bacteriologically confirmed MDR-TB cases diagnosed during the reporting period</p>	<p>National 482 (2014)</p>	<p>National 525 CTB: N/A</p>	<p>National 286 Annual Jan to June 2015</p> <p>The results are for the first 2 quarters of 2015 (Jan to March and April to June) based on the NTP report. July to September figures are not yet finalized.</p> <p>CTB areas Nampula 15 Tete 9 Sofala 53 Zambezia 21 Jan to June 2015</p> <p>USAID mandatory indicator</p>

#	Outcome	Indicator Definition	Baseline	Target	Result
3.1.5	#/% health facilities implementing intensified case finding (i.e. using SOPs)	<b>Description:</b> This indicator measures proportion of health facilities implementing intensified case finding (i.e. using SOPs) <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of health facilities implementing intensified case finding <b>Denominator:</b> Total number of all health facilities	National 13  2014 CTB	N/A No target was set in Year 1	National n/a  CTB d CTB will implement this in APA 2
3.1.8	% of TB cases (all forms) diagnosed among children (0-14)	<b>Description:</b> This indicator measures proportion of TB cases (all forms) diagnosed in children 0-14 years of age. When childhood TB is a priority, being able to report on and measure changes in case notification by age group is important. <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of TB cases (bacteriologically confirmed + clinically diagnosed; includes new & relapse cases) diagnosed in children 0-14 years of age in the past year. <b>Denominator:</b> Total number of all TB cases (bacteriologically confirmed + clinically diagnosed; includes new & relapse cases) reported in the past year	10%  2014	15%	National 11% (2,982/ 26,538)  Jan to June 2015  CTB 12%( 15,20/13177) Jan to June 2015
3.1.10	#/% of prisons conducting regular screening for TB	<b>Description:</b> Proportion of prisons conducting regular screening for TB according to internationally recommended national policy <b>Indicator Value:</b> Percent <b>Level:</b> National <b>Numerator:</b> Number of prisons conducting regular screening for TB <b>Denominator:</b> Total number of prisons	N/A	National 3 regional  CTB 1 in each of CTB 4 provinces	0 A technical working group on TB/HIV in prisons was established as a result of CTB efforts to bring together the stakeholders. This TWG is coordinated by SERNAP. This activity will continue in APA2.
3.1.13	#/% of presumptive TB patients referred by community referral systems	<b>Description:</b> Proportion of presumptive TB patients referred by community referral systems <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of presumptive TB patients referred by community referral systems <b>Denominator:</b> Total number of presumptive TB patients	National N/A 2014 CTB 22,180 2014	CTB 41,017  Nampula 10,958; Sofala 13,691; Tete 5,288; Zambezia 11,080	0 CTB will implement this in APA 2

#	Outcome	Indicator Definition	Baseline	Target	Result
3.1.14	#/% of total cases notified that were referred or diagnosed via CB approaches		National 5,383/58,270 (9%)  2014  CTB 3,375/27,930 (12%) 2014	4,102 (Nampula 1,096; Sofala 1,369; Tete 529; Zambezia 1,108)	0  This was not achieved as it is linked to community activities that are yet to take place. CTB will implement this in APA 2  Jan to Sept 2015
3.2.1	Number and percent of TB cases successfully treated in a calendar year cohort	<b>Description:</b> The proportion of a cohort of new and relapse TB cases (bacteriologically confirmed and clinically diagnosed) registered in a specified period that successfully completed treatment, whether with bacteriologic evidence of success ("cured") or without ("treatment completed"). <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of new and relapse TB cases (all forms) registered in a specified period that were cured or completed treatment. <b>Denominator:</b> Total number of new and relapse TB cases (all forms) registered in the same period.	NTP Annual report 2014  20,196/23,072 (88%)  <u>CTB</u> <u>Provinces</u> <u>2014</u> Nampula 3,790/4,153 (91%) Sofala 3,125/3,486 (90%) Tete 1,089/1,199 (91%) Zambezia 3,008/3,370 (89%)		11,012/12,208 (90%)  Nampula 3,790/4,153 (91%) Sofala 3,125 /3,486 (90%) Tete 1,089/1,199 (91%) Zambezia 3,008/3,370 (89%)  2013 cohort USAID mandatory indicator
3.2.3	#/% of HFs with TB services / DOTS	<b>Description:</b> This indicator measures TB services/DOTS coverage by looking at the percentage of health facilities providing TB services/DOTS. <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of health facilities providing TB services/DOTS <b>Denominator:</b> Total number of health facilities in the area	National 1,434 (100%)  2104	CTB 100%	CTB 483 (100%) of health facilities in CTB provinces with DOTS services  Jan to Sept 2015

#	Outcome	Indicator Definition	Baseline	Target	Result
3.2.4	#/% of eligible patients with drug-resistant TB enrolled on second-line treatment (disaggregated by sex, age and urban/rural)	<p><b>Description:</b> The proportion of eligible patients with drug resistant TB (RR-TB/MDR-TB/XDR-TB) enrolled on second-line treatment (not the cumulative number on treatment) in the reporting period (disaggregated by sex, age [0-4, 5-14, adults], and urban/rural)</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> The number of patients diagnosed with drug resistant TB (RR-TB/MDR-TB/XDR-TB) enrolled on second-line treatment in the reporting period</p> <p><b>Denominator:</b> Total number of patients diagnosed with drug resistant TB (RR-TB/MDR-TB/XDR-TB) in the reporting period</p>	NTP annual report 2014 N=482 (only those initiating second line treatment are reported)	NTP NSP 525/525 100%)	<p>CTB provinces 100% (160/160)</p> <p>Jan-Jun 2015</p> <p>USAID mandatory indicator</p>
3.2.7	Treatment success rate for MDR-TB patients on treatment	<p><b>Description:</b> The proportion of laboratory-confirmed MDR-TB patients successfully treated (cured plus completed treatment) among those enrolled on second line anti-TB treatment during the year of assessment (where applicable disaggregation by HIV status, XDR status).</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Number of laboratory-confirmed MDR-TB patients successfully treated (cured plus completed treatment)</p> <p><b>Denominator:</b> Total number of laboratory-confirmed MDR-TB patients enrolled on second line anti-TB treatment during the year of assessment.</p>	NTP Annual Report 2014 222 (46%)	NTP NSP 268/525 (51%)	<p>26/50 (52%) CTB provinces 2012 cohort</p> <p>USAID mandatory indicator</p>
3.2.8.	#/% of PMDT sites reporting on treatment cohort status quarterly	<p><b>Description:</b> Proportion of PMDT sites reporting on treatment cohort status quarterly</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Number of PMDT sites reporting on treatment cohort status quarterly</p> <p><b>Denominator:</b> Total number of PMDT sites</p>	N/A	4	<p>100% (4/4) (Nampula 1; Sofala 1; Tete 1; Zambezia 1) (each province treats, follows patients and reports cohort data on a quarterly basis. CTB provincial TO officers support DPS on this activity)</p> <p>Jan to Sept 2015</p>

#	Outcome	Indicator Definition	Baseline	Target	Result
3.2.20.	#/% of health facilities providing CB-DOTS services	<b>Description:</b> This indicator measures CB-DOTS service coverage by looking at the proportion of health facilities providing CB-DOTS services. <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of health facilities providing CB-DOTS services <b>Denominator:</b> Total number of health facilities in the area	National 675/1,434 2014	CTB 483/483 (100%)	0% (0/483) This was not achieved as it is linked to community activities that are yet to take place. CTB will implement this in APA 2 Jan to Sept 2015
3.2.21	#/% of districts providing CB-DOTS services	<b>Description:</b> This indicator measures CB-DOTS services coverage by looking at the proportion of districts with health facilities providing CB-DOTS services. <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of districts with health facilities providing CB-DOTS services <b>Denominator:</b> Total number of districts	National N/A CTB: 39/64 (61%) 2014	64/64 (100%)	0% (0/64) district This was not achieved as it is linked to community activities that are yet to take place. CTB will implement this in APA 2 Jan to Sept 2015

## Objective 2 Prevention

### Sub-objective 4. Targeted screening for active TB

In APA 1, CTB did not implement the planned contact tracing activities due to delays in implementing subgrants to local NGOs involved in CB DOTS work. Contact tracing will be implemented by CHWs who will identify, possibly screen (symptoms screen) and refer contacts of index cases. This activity will begin in APA 2.

### Key Results

Sub-grants for all six implementing partners were developed in APA 1 and will be approved at the beginning of APA 2. Table 5 shows implementing partners by province and number of districts.

**Table 5: CTB Selected Implementing Partners**

Province	Implementing Agencies	Number of Districts
Sofala	Comussanas	7
	Damien Foundation	6
Tete	Damien Foundation	15
Nampula	OLIPA ODES	8
	AMODEFA (Associação Moçambicana para Desenvolvimento da Famílias)	8
	ADPP (Ajuda de Desenvolvimento de Povo para Povo)	7
Zambézia	ADPP Zambezia	10
	DPS (Provincial Directorate of Health)	3

**Table 6: Tracking Sub-objective 4. Targeted screening for active TB**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
4.1.1.	#/% of eligible index cases of TB for which contact investigations were undertaken	<b>Description:</b> The proportion of eligible index cases of TB for which contact investigations were undertaken <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of index cases of TB for which contact investigations were undertaken during the period of assessment <b>Denominator:</b> Total number of index cases registered during the period of assessment	National 14,801 2014 annual data	3,691/4,102 (90%) (Nampula 986; Sofala 1,232; Tete 476; Zambezia 997)	0% (0/3,691)  This was not achieved as it is linked to community activities that are yet to take place. CTB will implement this in APA 2  Jan to Sept 2015
4.1.2	#/% of children (under the age of five) who are contacts of bacteriologically-confirmed TB cases that are screened for TB	<b>Description:</b> The proportion of children (<5) who are contacts of bacteriologically-confirmed TB cases that are screened for TB (investigations for TB must be performed in accordance with existing national guidelines) <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of children (<5) who are contacts of bacteriologically-confirmed TB cases that are screened for TB <b>Denominator:</b> Total number of children (<5) who are contacts of bacteriologically-confirmed TB cases	National 11,392 2014 annual data  CTB Provinces: 3,149  2014 annual data	CTB 7,382 (Nampula 1,972; Sofala 2,464; Tete 952; Zambezia 1,994)	0% (0/7,382)  This was not achieved as it is linked to community activities that are yet to take place. CTB will implement this in APA 2  Jul to Sept 2015
4.1.3	% of confirmed TB patients by case finding approach (CI, ACF, ICF), by key population and location (ex, slum dwellers, prisoners) (Service cascade)	<b>Description:</b> Proportion of bacteriologically-confirmed TB patients by case finding approach (contact investigation, active case finding, intensified case finding). This information would be stratified by key population (slum dwellers, prisoners, etc.). This measurement may require operations research using a valid tool. <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of bacteriologically-confirmed TB patients identified among investigated among key population group <b>Denominator:</b> Total number of investigated key population group members	National: 0.3% (186/58270)  CTB: 0.2% (51/279309)  2014	N/A	NTP will report on this indicator in the 2015 annual report. Currently data collected is not disaggregated by case finding approach nor key population  CTB did not implement this activity in APA1. Activity carried over to APA 2 Jan to Sept 2015



### Sub-objective 5. Infection control

In terms of strengthening TB infection control (TB-IC) measures, CTB piloted during APA1 an integrated NTP/CTB supportive supervision visit checklist that included aspects of IC in the health facilities. The supervision checklist was approved by the NTP for use during all joint supervisory visits. CTB will seek to strengthen its role in TB-IC through continued CTB technical assistance to NTP given the importance of TB-IC in reducing the incidence of drug resistant TB.

### Key Results

CTB in collaboration with NTP and the provincial directorates of health conducted TB-IC assessments in 24 Health Facilities (HF) in Tete, Sofala and Zambezia provinces (Tete 8, Sofala 8 and Zambezia 8). Overall, 50% of the HF have plans for IC but they have not been implemented or followed up. In the remaining 50% of the HFs without IC plans, CTB will support them in the development of such plans. In coordination with clinical partners CTB will support the effective implementation and follow up of TB-IC plans in each HF.

Table 7: Tracking of Sub-objective 5. Targeted screening for active TB

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
5.1.1	Status of TB-IC implementation in health facilities	<b>Description:</b> This indicator measures the status of TB-IC implementation in health facilities. <b>Indicator value:</b> Score based on below: 0=no TB-IC policy/plan and no organized TB-IC activities; 1=national TB-IC guidelines have been approved and disseminated in accordance with WHO policy; 2=TB-IC being implemented in pilot or limited health facilities; 3=TB-IC implemented nationally and/or national certification program implemented <b>Level:</b> National	2 2014	3	2 CTB completed assessment of TB-IC in 24 health facilities Jan to Sept 2015
5.1.2	#/% of health facilities implementing TB-IC measures with Challenge TB support (stratified by TB and PMDT services)	<b>Description:</b> Proportion of health facilities implementing TB-IC measures with Challenge TB support (stratified by TB and PMDT services) <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of health facilities implementing TB-IC measures with Challenge TB support in the area <b>Denominator:</b> Total number of health facilities in the area	N/A	CTB 32/64 (50%)  Health facilities in urban areas in 1 HF per district  Jan to Sept 2015	0 This was not achieved as it is linked to community activities that are yet to take place. CTB will implement this in APA 2.  Jan to Sept 2015

#	Outcome	Indicator Definition	Baseline	Target	Result
5.1.3	#/% of TB-IC (i.e. FAST) certified health facilities	<p><b>Description:</b> This indicator measures the number and percent of health facilities implementing FAST (i.e. based on the criteria of FAST strategy - "Find cases Actively, Separate safely, and Treat effectively"). Note this measurement requires survey of facilities selected through lot quality assurance sampling and by using the 10-item modified CDC monitoring tool (health facility scoring YES on items 2, 4 and 5 is qualified as implementing FAST).</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Number of TB-IC certified health facilities in the area</p> <p><b>Denominator:</b> Total number of health facilities in the area</p>	<p>4/8(50%)</p> <p>(8 TB CARE I, 4 CTB provinces)</p> <p>2014</p>	<p>32/64</p> <p>Health facilities in urban areas in 1 HF per district</p> <p>Jan to Sept 2015</p>	<p>0</p> <p>Mapping exercise completed on assessment of IC in 24 HF in CTB provinces</p> <p>Jan to Sept 2015</p>
5.1.4	% of TB service delivery sites in a specific setting (ex, prison-based, hospital-based, private facility) that meet minimum infection control standards	<p><b>Description:</b> This indicator measures the percent of TB service delivery sites in a specific settings (disaggregated by public and private health facilities) that meet minimum IC standards in line with global guidance. Note this measurement requires survey of facilities selected through lot quality assurance sampling and by using the 10-item modified CDC monitoring tool.</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Number of TB service delivery sites that meet minimum IC standards in the area</p> <p><b>Denominator:</b> Total number of TB service delivery sites in the area</p>	N/A	Target not set	<p>CTB did not implement this activity in APA1. Activity carried over to APA 2.</p> <p>Jan to Sept 2015</p>
5.1.5	#/% of high-risk sites in which TB-IC is implemented with Challenge TB support (stratified by applicable sites: PMDT, HIV, mines, prisons, etc.)	<p><b>Description:</b> This indicator measures the number and percent of high-risk sites in which TB-IC is implemented with Challenge TB support (stratified by applicable sites: PMDT, HIV, mines, prisons, etc.)</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Number of high-risk sites in which TB-IC is implemented with CTB support in the area</p> <p><b>Denominator:</b> Total number of high-risk sites in the area</p>	<p>3 prisons (TB CARE I/CTB)</p> <p>2014</p>	<p>7 prisons (3 regional + 4 CTB provinces)</p> <p>Jan to Sept 2015</p>	<p>0% (0/7) CTB</p> <p>This was not achieved as it is linked to community activities that are yet to take place. CTB will implement this in APA 2.</p> <p>Jan to Sept 2015</p>

#	Outcome	Indicator Definition	Baseline	Target	Result
5.2.1	Status of TB disease monitoring among HCWs (0=no policy/plan/ monitoring in place; 1=policy and scale-up plan for addressing TB among healthcare workers are enacted by the MoH; 2= monitoring program piloted or limited to certain areas; 3=annual reporting on TB among HCWs is available as part of the national R&R system)	<b>Description:</b> This indicator measures the status of TB disease monitoring among HCWs in the country. <b>Indicator value:</b> Score based on below: 0=no policy/plan/ monitoring in place; 1=policy and scale-up plan for addressing TB among healthcare workers are enacted by the MoH; 2= monitoring program piloted or limited to certain areas; 3=annual reporting on TB among HCWs is available as part of the national R&R system <b>Level:</b> National	2	3 (annual reporting is guaranteed in the 4 CTB target provinces)	3 Annual reporting on TB among HCWs is available as part of the national R&R system)
5.2.2.	#/% of HCWs screened for active TB disease (frequency of measurement based on policy)	<b>Description:</b> This indicator measures the number and percent of HCWs screened for active TB disease in line with national policy during the reporting period <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of HCWs screened for active TB disease in line with national policy during the reporting period <b>Denominator:</b> Total number of HCWs	5% (2,069/44,081) 2014	Target not set	No data  Jan to Dec 2015 Data will be collected from NTP annual report for 2015, finalized in March 2016

#	Outcome	Indicator Definition	Baseline	Target	Result
5.2.3	Number and % of health care workers diagnosed with TB during reporting period	<b>Description:</b> This indicator measures the percent of healthcare workers (HCWs) diagnosed with TB (all forms) annually (disaggregated by gender and age). This measurement may require a special study using a validated tool and/or methodology. <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of HCWs diagnosed with TB (all forms) during past year <b>Denominator:</b> Total number of HCWs in the same year In countries where the NTP does not collect this indicator or is not willing to share the data, Challenge TB should document this challenge.	National 186/2,069 (9%) of those screened 2014, NTP report  186/44,081 (0.4%) Denominator is total number of HCW and not number of HCW screened for TB  CTB 51/19,346 (0.3%)  2014	N/A	No data Data will be collected from the NTP annual report for 2015, which will be finalized in March  Jan to Dec 2015  USAID mandatory indicator

#### Sub-objective 6. Management of latent TB infection

In APA 1 CTB invested in training of 371 health professionals on MDR-TB (1 central training) and Pediatric TB (in Tete and Nampula provinces) to ensure that eligible patients are put on preventive treatment and follow up, and support an effective monitoring system through training, integrated supervision visits in collaboration with clinical partners.

#### Key Results

No key results to be reported. Because TB treatment is implemented by the health system and is supported by the clinical partners, CTB must coordinate with these partners to effect change.

**Table 8: Tracking of Sub-objective 6. Management of latent TB infection**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
6.1.1	Status of implementing LTBI diagnosis and treatment strategies (0=no policy or practice in place; 1=policies have been developed/updated; 2=LTBI strategies piloted or implemented in limited settings; 3=LTBI strategies implemented nationally	<b>Description:</b> This indicator measures the status of implementing LTBI diagnosis and treatment strategies in the country. <b>Indicator value:</b> Score based on below: 0=no policy or practice in place; 1=policies have been developed/updated; 2=LTBI strategies piloted or implemented in limited settings; 3=LTBI strategies implemented nationally <b>Level:</b> National	2	2 (for 4 CTB target provinces)	This was not achieved due to delay in startup of CTB CB DOTS. CTB will implement this in APA 2
6.1.2.	% of eligible persons completing LTBI treatment, by key population and	<b>Description:</b> This indicator measures the percent of eligible persons completing LTBI treatment, by key population	N/A	N/A	This was not achieved CTB will implement this in APA 2

#	Outcome	Indicator Definition	Baseline	Target	Result
	adherence strategy	and adherence strategy according to national policy <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of eligible persons completing LTBI treatment <b>Denominator:</b> Total number of eligible persons			
6.1.3	% of contacts on preventative therapy that complete the full treatment regimen	<b>Description:</b> This indicator measures the percent of contacts on preventative therapy that complete the full treatment regimen according to national policy <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of contacts on preventative therapy that complete the full treatment regimen <b>Denominator:</b> Total number of contacts	N/A	80%	0%  Although CTB did not implement community activities in APA1, training was provided for MCHN in two provinces. In the next quarter CTB will finalize in the remaining two provinces.
6.1.5.	A national quarterly monitoring system for LTBI initiation and completion is functional	<b>Description:</b> The country has a functional quarterly monitoring system for LTBI initiation and completion <b>Indicator Value:</b> Yes/No <b>Level:</b> National	N/A	Yes?	No NTP has a system to monitor initiation but not completion. CTB will support and improve this system from initiation to completion through CHW under CB DOTS. The CHW will follow up and monitor all HIV patients and children under 5 years on IPT
6.1.11	Number of children under the age of 5 years who initiate IPT	<b>Description:</b> The number of children under the age of 5 years who initiate isoniazid preventive therapy (IPT) during the reporting period.  <b>Indicator Value:</b> Number  <b>Level:</b> National and Challenge TB geographic areas  <b>Numerator:</b> The number of children under the age of 5 years who initiate IPT during the reporting period.	National 17,026  CTB 3,149 in 2014, NTP report	NTP Annual Report  Data not yet available  Targets TBD	Data to be collected from NTP 2015 annual report  USAID mandatory indicator

## Objective 3. Strengthened TB Platforms

### Sub-objective 7. Political commitment and leadership

CTB supports the NTP's efforts to increase TB awareness by supporting the NTP in commemorating World TB Day.

#### Key Results

As planned in APA 1, CTB printed and distributed T-shirts and banners to support NTP during the World TB Day. Over 3,000 IEC materials on TB and TB/HIV were printed and distributed.

**Table 9: Tracking of Sub-objective 7. Political commitment and leadership**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
7.2.x	# of World TB day events supported by CTB		N/A	1 World TB day commemorated	1 World TB day commemorated with support from CTB. T-shirts and IEC materials on TB and TB/HIV were printed and donated to NTP national level. CTB TO also participated at central ceremony at the Machava hospital in Maputo
7.3.x	# of targeted topics included on the agenda	<p><b>Description:</b> This indicator measures the number targeted topics included on the agenda</p> <p><b>Indicator Value:</b> Number</p> <p><b>Level:</b> Nationally.</p> <p><b>Numerator:</b> Number of topics included in the agenda</p>	N/A	N/A	<p>The current agenda is in revision and will finalized in APA 2</p> <p>Jan to Sept 2015</p>
7.2.3	% of activity budget covered by private sector cost share, by specific activity	<p><b>Description:</b> This indicator measures the proportion of CTB project activity budget covered by private sector cost share (if not monetary, will require estimation of costs) by specific activity.</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> Nationally for activities at national scale and in Challenge TB geographic areas for activities focused in specific geographic areas where Challenge TB is working.</p> <p><b>Numerator:</b> Amount of private sector cost share covering CTB project activity during most recent fiscal year</p>	N/A	N/A	<p>0%</p> <p>USAID mandatory indicator</p>

		<b>Denominator:</b> Total CTB project activity budget plus private sector cost share amount during the year of assessment.			
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### Sub-objective 8. Comprehensive partnerships and informed community involvement

The STOP TB partnership in Mozambique is led by the Ministry of Health and is composed of WHO, USAID, CDC and other partners.

#### Key Results

CTB did not work in this sub-objective, but that the mandatory indicator is shared below in table 10 for informational purposes.

Table 10: Tracking of Indicators Sub-objective 8. Comprehensive partnerships and informed community involvement

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
8.1.3.	Status of National Stop TB Partnership	<p><b>Description:</b> This indicator measures the status of National Stop TB Partnership by using special questionnaire for collecting relevant country level data</p> <p><b>Indicator Value:</b> The score based on below:  <b>0</b>= no National Stop TB Partnership exists  <b>1</b>= National Stop TB Partnership established, and has adequate organizational structure; and a secretariat is in place that plays a facilitating role, and signed a common partnering agreement with all partners; but does not have detailed charter/plan, and does not meet regularly/ produce deliverables;  <b>2</b>= National Stop TB Partnership established, has adequate organizational structure and in a participatory way has developed detailed charter/plan, but does not meet regularly and does not produce deliverables;  <b>3</b>= National Stop TB Partnership established, has adequate organizational structure, has developed detailed charter/plan, meets regularly and critical deliverables are produced</p> <p><b>Level:</b> National</p>	0 (2014)	N/A	<p>2 National Stop TB Partnership established, has adequate organizational structure and in a participatory way has developed detailed charter/plan, but does not meet regularly and does not produce deliverables.</p> <p>USAID mandatory indicator – not in Year 1 work plan, but measured at the end of Year 1</p>

#	Outcome	Indicator Definition	Baseline	Target	Result
8.1.4	% of local partners' operating budget covered by diverse non-USG funding sources	<p><b>Description:</b> This indicator measures the proportion of CTB project local partners' operating budgets covered by non-USG funding sources. A special questionnaire for collecting relevant country level data among CTB local partners is available.</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> Challenge TB geographic areas</p> <p><b>Numerator:</b> Amount of CTB local partners' operating budgets covered by non-USG funding sources (TGF, WB, EU, ADB, DFID, private donations, investment income, other revenue, etc.)</p> <p><b>Denominator:</b> Total operating budget of CTB local partners' operating budget (USG + non-USG sources) during the year of assessment.</p>	N/A	N/A	<p>0%</p> <p>No funds were allocated to partners in APA 1.</p> <p>USAID mandatory indicator – not in Year 1 work plan, but measured at the end of Year 1</p>
8.2.1	Global Fund grant rating	<p><b>Description:</b> This indicator presents Global Fund TB grant performance rating results</p> <p><b>Indicator value:</b> Score is based on the following:</p> <ul style="list-style-type: none"> <li>A1 Exceeds expectations</li> <li>A Good performance</li> <li>A2 Meets expectations</li> <li>B1 Adequate</li> <li>B2 Inadequate but potential demonstrated</li> <li>C Unacceptable</li> </ul> <p><b>Level:</b> National</p>	B1 (2014)	n/a	<p>B1</p> <p>USAID mandatory indicator – not in Year 1 work plan, but measured at the end of Year 1</p>

### Sub-objective 9. Drug and commodity management systems

In Year 1, CTB designated funds to provide emergency transport of TB drugs if need be from national level to guarantee that there is no shortage of TB drugs in CTB provinces and that all TB patients complete their treatment without interruptions due to lack of drugs.

### Key Results

At national and provincial levels, NTP did not seek support from CTB for emergency transport of TB drugs to CTB provinces as there were no reported stock outs of TB drugs. However, sporadic stock outs at peripheral and district levels were reported mainly due to drug management difficulties and communication issues and this was resolved through redistribution.



**Table 11: Tracking of Sub-objective 9. Drug and commodity management systems**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
9.1.1.	# of stock outs per [year] of anti-TB drugs, by type (first and second line) and level (ex, national, provincial, district)	<b>Description:</b> This indicator should be used to report the number of stock outs of any type of TB drug at any level of the health system that results in interruption of treatment. <b>Indicator Value:</b> Number <b>Level:</b> This indicator should be reported at whatever level a stock out those results in interruption of treatment occurs.	No stock-out of drugs reported that resulted in treatment interruption	N/A	There were no stock outs of anti-TB drugs reported according to NTP but there were delays in the distribution process from the provinces to the districts. However, we have no evidence of stock out at the district levels.  USAID mandatory indicator

**Sub-objective 10. Quality data, surveillance and M&E**

Continuing with the activities started under TB CARE I to strengthen the NTP M&E system by developing an electronic register and reporting (ER+R) system, CTB provided support during the central TOT training on revised paper based tools. Cascade training will take place in late 2015 (October and November) in CTB provinces. In preparation for the training, CTB printed the approved tools and registers for all its districts. CTB also supported NTP and the PMDT NTP adviser in the development and finalization of the MDR TB excel data base that is already approved for use by the NTP. The data base is designed based on the approved MDR TB revised patient register. CTB will continue to provide support in Year 2 to update the register for CTB provinces.

**Key Results**

CTB supported the NTP in revising and finalizing TB forms and registers to be in compliance with WHO definitions and reporting framework for tuberculosis–2013 revision (updated December 2014). These tools were approved by the NTP and CTB with other NTP technical partners have assisted in TOT training of districts supervisor at central level. Cascade training will take place in APA 2. In preparation for this, CTB supported the NTP in printing of the tools that will be used in its provinces once trainings are completed. Full role out will take place from December 21, 2015 onwards.

In assuring quality data reporting and follow-up, CTB along with other partners provided assistance to NTP during the development and finalization of the provincial level patient-based interim excel data base. Only MDR-TB patients enrolled from 2013 onwards will be added to the data base for cohort purposes. NTP has approved the data base for national use, training will be provided to provincial supervisors and their deputies. To feed the data base, a monthly reporting form has been designed and approved by the NTP to be used by district supervisors to report MDR-TB monthly data to the province level. CTB hopes that this will bridge the gap between the current outdated database excel based and the ER+R system.

In coordination with NTP, CTB implemented three data quality assessments in three districts health facilities in Sofala province. This was a very useful activity for the NTP as it highlighted data challenges such as wrong classification of patients during case notification and treatment outcome. See annex IV Data Improvement Plan.

CTB/KNCV and FHI 360 provided support and technical assistance to the NTP in the prevalence study preparation and planning process. CTB has actively participated in the technical working group meetings and contributed to the development of national prevalence survey protocol.

CTB/KNCV continues to provide TA to NTP on finalization of protocol development, specification of equipment and list for procurement.

**Table 12: Tracking of Sub-objective 10. Quality data, surveillance and M&E**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
10.1.1.	#/% of PMDT sites reporting consistently via the ERR	<b>Description:</b> This indicator measures the number and percent of PMDT sites reporting consistently via the electronic recording and reporting system (ERR) <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of PMDT sites reporting consistently via the ERR <b>Denominator:</b> Total number of PMDT sites	N/A	1	0% NTP has recently approved the interim Excel data base. Training will be provided in APA2 prior to roll out  Jan to Sept 2015
10.1.2.	#/% of eligible health facilities reporting TB data in real time or at least quarterly via the ERR	<b>Description:</b> This indicator measures the number and percent of health facilities reporting TB data in real time or at least quarterly via the ERR <b>Indicator Value:</b> Percent <b>Level:</b> National and Challenge TB geographic areas <b>Numerator:</b> Number of health facilities reporting TB data in real time or at least quarterly via the ERR <b>Denominator:</b> Total number of health facilities with TB services	N/A		0 NTP revised tools and registers were approved by the NTP in late 2015 TOT has been conducted and cascaded trainings will take place in year 2. NTP will roll out the revised tools and registers in all HF across the country as from December 21 <sup>st</sup> 2015  Once the ER+R is finalized and approved by the NTP, CTB in coordination with NTP will pilot it in Sofala province in APA 2
10.1.x	# of provinces using interim database for reporting Numerator: # of provinces submitting data Denominator: 11 provinces	<b>Description:</b> # of provinces using interim database (requested by NTP) for reporting aggregated data to NTP on a quarterly basis <b>Indicator Value:</b> Number <b>Level:</b> National <b>Source:</b> data submitted via interim database <b>Means of Verification:</b> data available in database	N/A	11 Provinces	Not achieved due to the delay in the finalization and approval of the revised NTP tools and registers (approved in late August 2015)  Jan to Sept 2015

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
10.1.y	# of Data verification and improvement visits conducted jointly with NTP	<b>Description:</b> # of visits to health facilities or districts for data verification and improvement <b>Indicator Value:</b> <b>Level:</b> <b>Source:</b> data verification and improvement report <b>Means of Verification:</b> Report available at facility <b>Numerator:</b> # of visits conducted <b>Denominator:</b> # of planned visits	N/A	4 DQA visits conducted	3 DQA conducted in 3 health facilities in Sofala province and result shared with NTP, DPS, and HF  Jan to Sept 2015
10.1.4.	Status of electronic recording and reporting system	<b>Description:</b> This indicator measures the status of electronic recording and reporting (ERR) Indicator value: Score based on below: 0=R&R system is entirely paper-based; 1=electronic reporting to national level, but not patient/case-based or real time; 2= patient/case-based ERR system implemented in pilot or select sites (TB or MDR-TB); 3=a patient/case-based, real-time ERR system functions at national and subnational levels for both TB and MDR-TB; 4= a patient/case-based, real-time ERR system is functional at national and subnational levels for both TB and MDR-TB completely and meets WHO standard for TB surveillance data quality - i.e., data in the national database are accurate, complete, internally consistent, within timelines set, validated and free of duplicates and a data quality audit system is put in place (source: Standards and Benchmarks for Tuberculosis Surveillance and Vital Registration Systems – Checklist and User Guide, WHO, 2014). <b>Level:</b> National	0	1	1 NTP will pilot ER+R in APA 2  Jan to Sept 2015  USAID mandatory indicator

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
10.2.1	Standards and benchmarks to certify surveillance systems and vital registration for direct measurement of TB burden have been implemented	<b>Description:</b> National TB surveillance system is certified based on WHO standards and benchmarks for TB surveillance and vital registration systems (for paper-based or electronic systems). For a country's TB surveillance systems to be certified as providing a direct measurement of TB cases and TB deaths, all 10 standards and their associated benchmarks (Part B, Section 1) should be met (source: Standards and Benchmarks for Tuberculosis Surveillance and Vital Registration Systems – Checklist and User Guide, WHO, 2014). The country standards and benchmarks score will be monitored as a sub-indicator to track progress. <b>Indicator Value:</b> Yes/No <b>Level: National</b>	No	No	Yes MEASURE Evaluation conducted a tuberculosis (TB) assessment in 2014  USAID mandatory indicator – not in Year 1 work plan, but measured at the end of Year 1
10.2.2.	Prevalence survey conducted/completed in the last three years	<b>Description:</b> TB prevalence survey has been conducted/completed within the last three years <b>Indicator Value:</b> Yes/No <b>Level: National</b>	N/A	N/A	Prevalence study to commence in APA 2. Protocol completion in process and CTB participated in the TWG meetings
10.2.4.	#/% of operations research, evaluation or epidemiological assessment study results disseminated (stratified by level of dissemination: report, presentation, publication)	<b>Description:</b> This indicator measures the number and percent of studies (operations research, evaluation or epidemiological assessment ), results of which have been disseminated (stratified by level of dissemination: report, presentation, publication) <b>Indicator Value:</b> Percent <b>Level: National</b> <b>Numerator:</b> Number of studies with results disseminated during the reporting period <b>Denominator:</b> Total number of studies conducted during the reporting period	N/A	1 CB-DOTS Evaluation Study	0  To be disseminated in APA 2  Jan to Sept 2015

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
10.2.6.	% of operations research project funding provided to local partner (provide % for each OR project)	<b>Description:</b> This indicator measures the proportion of Challenge TB-supported operations research project funding provided to local partner(s), by each OR project. <b>Indicator Value:</b> Percent <b>Level:</b> Challenge TB geographic areas <b>Numerator:</b> Amount of operations research project funding provided to local partner by Challenge TB during a year <b>Denominator:</b> Total Challenge TB operations research budget during the year of assessment.	N/A	0%	0% CTB did not carry out operational research in APA 1  USAID mandatory indicator – not in Year 1 work plan, but measured at the end of Year 1

### Sub-objective 11. Human resource development

To guarantee effective and successful implementation of planned activities, there is a need to make sure that qualified staff is available at central level who will provide technical supportive supervision visits and on-the-job training to provincial, district and peripheral level staff. CTB provided support to MOH, NTP and CTB staff to participate in international trainings, international events and other relevant national trainings to better equip them for successful activity implementation.

In achieving effective integrated supervision, in APA 1 CTB participated in the development and piloting of a joint supportive supervision visit checklist in coordination with NTP, HIV, Lab, infection control department, CMAM and other partners. The objective is to conduct limited visits and avoid overwhelming the district and peripheral staff with numerous supervisory visits.

### Key Results

CTB TOs have provided technical assistance in the development of an integrated supervision model that will enable multiple technical areas to jointly undertake supervisory visits. The tool was piloted during two supervisory visits to two CTB provinces. Thereafter, support was provided in the final revision and finalization of the supervision guideline. This tool has been approved by NTP for use during all joint supervisory visits.

Six integrated supervision visits took place in Tete, Nampula, Zambezia and Sofala provinces. This was organized in coordination with NTP and DPS. The supervision team was a multidisciplinary team, composed of representatives of diverse areas in TB including TB, MDR-TB, TB/HIV, pediatric TB, laboratory, pharmacy and monitoring and evaluation. Despite the logistical challenges, the joint supervisions were very productive as each area was reviewed in depth and orientations and mentoring were done on site.

CTB supported and participated in four provincial quarterly review meetings, one in each of the CTB provinces. These meetings provide a forum to review, validate and consolidate district quarterly data prior to sending to NTP central level. However, the timing of the meetings is the main challenge. Normally provinces set meetings a month after closing their quarterly reports that is October/November for the July – September reporting period. From April to September 2015, CTB supported 4 provincial meeting.

**Table 13: Tracking of Sub-objective 11. Human resource development**

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
11.1.1	# of quarterly performance meetings at provincial level that include data review	<p><b>Description:</b> This indicator measures the # of quarterly provincial performance review meetings that include data review and have documented this.</p> <p><b>Indicator Value:</b> Number</p> <p><b>Level:</b> CTB target provinces</p> <p><b>Source:</b> Meeting minutes</p> <p><b>Means of Verification:</b> Review of data presented alongside minutes</p> <p><b>Numerator:</b> # of provincial meetings held</p> <p><b>Denominator:</b> # of provinces supported by CTB * # of quarters"</p>	N/A	13 performance meetings held (3 at each province and 1 at the central level)	4 (1 in each CTB province)  April to Sept 2015
11.1.2	% of planned supervisory visits conducted (stratified by NTP and Challenge TB funded)	<p><b>Description:</b> The proportion of planned supervisory visits conducted (stratified by NTP and Challenge TB funded)</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Number of planned supervisory visits conducted during reporting period</p> <p><b>Denominator:</b> Total number of supervisory visits planned for the same period</p>	N/A	100% (32/32)	19% (6/32)  July to Sept 2015 Activity will continue in APA 2

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
11.1.3.	# of healthcare workers trained, by gender and technical area	<p><b>Description:</b> This indicator measures the number of healthcare workers (which includes health facility staff, community health volunteers, laboratory staff, sputum transport technicians, community-based DOTS workers) trained, by gender and sub-objective. Training includes any in-person, virtual, or on-the-job training that is longer than half a day and for which curriculum is available. This indicator is interchangeable with 'Number of individuals trained in any component of the WHO Stop/End TB Strategy with USG funding' which USAID missions may have as a requirement for internal agency reporting.</p> <p><b>Indicator Value:</b> Number</p> <p><b>Level:</b> National and Challenge TB geographic areas</p> <p><b>Numerator:</b> Number of HCWs trained during the reporting period</p>	N/A	1,182	<p>371 (200 males and 171 females)</p> <p>CHWs were not trained in APA 1, CTB is finalizing the sub-award process for selected IA Activity will continue in APA 2</p> <p>Jan to Sept 2015</p> <p>USAID mandatory indicator</p>
11.1.5.	% of USAID TB funding directed to local partners	<p><b>Description:</b> This indicator measures the proportion of CTB annual funding directed to local partners</p> <p><b>Indicator Value:</b> Percent</p> <p><b>Level:</b> National. Although CTB may be working with local partners in specific geographic areas, the overall total going to local partners at any level should be included in the numerator and compared to the overall country budget.</p> <p><b>Numerator:</b> Amount of CTB country project funding directed to local partners during the most recent fiscal year</p> <p><b>Denominator:</b> Total CTB country project budget during the most recent fiscal year.</p>	2014 N/A	<p>APA 1 budget</p> <p>25.93%</p> <p>(832,080 / 3,208,047)</p>	<p>0%</p> <p>At the time of reporting, CTB is still waiting for the finalization and signing of the sub-awards agreement prior to disbursement of fund to implementing partners</p>

## 4. Challenge TB Support to Global Fund Implementation

### Current Global Fund TB Grants

Name of grant & principal recipient (i.e., Tuberculosis NFM - MoH)	Average Rating*	Current Rating	Total Approved Amount	Total Disbursed to Date	Total expensed (if available)
Ministry of Health	B1	B1	\$64.7 m	\$25.0 m	

\* Since January 2010

### In-country Global Fund status - key updates, current conditions, challenges and bottlenecks

The country has a new MDR TB technical adviser (Dr. James Cowan) at the NTP to provide TA to the NTP MDR TB focal point. CTB has actively coordinated, collaborated and supported the PMDT focal person to support NTP.

Challenges noted to date have been budgeting issues with funds not sufficient to cover planned activities (under budgeting), delay in the disbursement of funds for NTP planned activities at the MOH level, and minimal coordination between NTP and partners on GF related to planning, implementation and regular update on progress.

### Challenge TB involvement in GF support/implementation, any actions taken during Year 1

CTB regularly provided technical assistance to Fundo de Desenvolvimento Comunitario (FDC) (Global Fund/NTP community partner) on CB-DOTS strategies and led the development of a standard community register for consistent reporting to NTP on community indicators (the register is yet to be approved by NTP).

The CTB program director and TO participated in NTP/GF workshop meetings during the NTP GF proposal process.

CTB supported TOT on clinical and operational management of MDR-TB/XDR-TB, in partnership with GF through technical assistance and cost sharing, bringing in Prof. José Caminero to facilitate the TOT training

## 5. Challenge TB Success Story

### Accreditation of the Maputo National Tuberculosis Reference Laboratory: Huge step towards for TB Control in Mozambique

After three years preparation, the NTRL was finally accredited by the Portuguese Institute for Accreditation for ISO 15189 on March 27, 2015. The Accreditation Certificate for the lab includes techniques for the diagnosis of tuberculosis by fluorescence microscopy and as well as solid and liquid culture exams. The certificate is the highest international recognition of technical competence and quality management in laboratories with the Mozambique NTRL being one of the few public medical laboratories in Africa and the first among the 250 laboratories of the Stepwise Laboratory Quality Improvement Process Towards Accreditation Initiative (SLIPTA) to achieve international accreditation. The ceremony was presided over by the Minister of Health, with participation of the National Directors from the National Institutes of Health and Maputo Central Hospital, Technical staff and experts from the NTRL and partners. For the Minister, the accreditation of the Maputo NTRL was.



"... a milestone under the MOH's efforts to control TB in Mozambique, a disease with significant weight in public health "

**Figure 3- Dr. Nazira Abdula Mozambique Minister of Health during the Accreditation Ceremony, March 2015**



## 6. Operations Research

Title of OR study	Implementation Status	Key findings	Dissemination
Impact of the Implementation of the GeneXpert on Increasing TB Case Detection Rate during TB CARE I Project Support in Mozambique (Impacto da Implementação do GeneXpert no aumento da Taxa de detecção de casos de TB durante o apoio do projecto TB CARE I em Moçambique)	Protocol development in process	N/A	N/A

## **7. Key Challenges during Implementation and Actions to Overcome Them**

The finalization of the sub-award process has been delayed due to the need to translate the CB-DOTS implementing agencies (IA) program description (Scope of work and budget) from Portuguese to English for review and approval by FHI 360 contracts' department. As a result, actual activity implementation by IA at field level will be delayed. As a way to fast track the translation process, the project has contracted external translators to support the activity. The consultant completed the translation in 3<sup>rd</sup> quarter, APA 1. CTB is currently working in close coordination with FHI HQ, CTB team and Contract Management Service (CMS) so as to accelerate the process.

The high cost for sample transportation is a challenge as only one courier provides sample transportation services from peripheral health facilities to district and/or provincial level. Given that the estimated cost presented by the courier is around USD 100,000 per district per year, the project reverts to implement the strategy earlier identified to integrate a new systematic specimen transportation system to the existing CB-DOTS services in year 2.

During the SRL visit to Beira Reference Laboratory, it was possible to monitor the lab and identify gaps that need to be addressed. In Year 2, CTB will work with NTP to design a strategy for provision of permanent technical support to the RRLs of Beira and Nampula.

The delay in the approval of final revised NTP registers and tools led to a subsequent delay in finalizing of ER+R patient based register. In Year 2 (late October to November 2015), CTB will support the NTP in the provincial level training of NTP districts supervisors and deputies on the approved registers and tools. CTB has also support in the printing these tools to for its 4 provinces so as to ensure immediate availability material once the NTP roll out the use of these registers and tools in late December 2015.

## **8. Lessons Learnt/ Next Steps**

A lot of activities planned for Year 1 which have a direct influence on the NTP major indicators (Case detection, notification and treatment outcomes) are linked to implementation of the CB DOTS activities. With the delay in implementation of community activities, the project's contribution to these indicators has been limited. While linking activities with CB DOTS has been important as a cost saving measure and for efficiency, CTB will in year two, attempt to separate some of the community active case finding activities previously linked to CB DOTS implementing agencies to be directly implemented from central level to reduce risk of depending on signing of sub-awards.

In Year 1, good coordination and collaboration was noted between NTP, USAID, CTB and other partners (especially community TB partners for GF). Such coordination led to the successful implementation of the MDR-TB training (cost shared between CTB and GF), development of community data collection tools with support from NTP and FDC (GF community partner), the revision of M&E data collection instruments and continued support in finalization of the ER+R system for the NTP. The basis of such excellent coordination has been active communication and recognition by the NTP of the role partners play in TB control. This coordination will be strengthened and improved in year two with integrated NTP/CTB activities planned.

For Year 2, the project will continue working in the same technical areas as in Year 1 with more focus on comprehensive, high quality diagnosis and patient-centered care and treatment. Under intervention area 7 (political commitment and leadership), unlike previous years (under TB CARE I and year one for CTB), no direct funding will be done as this will be covered using GF funds. Focus of the project will be to strengthen advocacy activities so that the country leadership recognizes that TB is a public health emergency and need attention as other epidemic diseases.

## Annex I: Year 1 Results on Mandatory Indicators

<b>MANDATORY Indicators</b>					
<i>Please provide data for the following mandatory indicators:</i>					
<b>2.1.2 A current national TB laboratory operational plan exists and is used to prioritize, plan and implement interventions.</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>	<b>Notes</b>
<b>Score</b> as of September 30, 2015	1	N/A	<b>None</b>	The TB Lab strategic plan, which includes an operational plan, was developed with support from TB CARE I, in APA 1. CTB is working the National Department of Laboratories to have the plan integrated into the National plan. The national Lab SP is in process of budget revision prior to submission for approval.	Provide relevant score in line with the indicator definition as presented in CTB M&E framework. Send a copy of current national TB laboratory operational plan to Mamuka and Claire.
<b>2.2.6 Number and percent of TB reference laboratories (national and intermediate) within the country implementing a TB-specific quality improvement program i.e. Laboratory Quality Management System</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>	<b>Notes</b>

<b>Number and percent</b> as of September 30, 2015	<p>1/3 (33%) Maputo National Reference Lab - Accredited by IPAC</p> <p>Nampula Regional Reference Lab - 0 star Beira Regional Reference Lab - 0 star</p>	N/A	<b>Substantial</b>	<p>National Reference Laboratory (NRL) is accredited by IPAC (Intituto de Português para Acreditação/National Portuguese Institute for Accreditation) where CTB Lab officer led the NRL accreditation process on biosafety and bio security, and she is in the process of training the new NRL biosafety officer, and has been presented with a Merit Certificate for her contribution to the accreditation process;</p> <p>Beira and Nampula reference labs are also implementing and following a step-wise plan for a TB laboratory quality management system towards accreditation. CTB, in coordination with NRL, organized a visit from a technician from Milan Supra National Reference Lab who came and provided Technical assistance to NRL and Beira regional reference labs to improve lab quality management.</p>	Under additional information, provide a score/rating for every reference laboratory implementing LQMS, either the "GLI Stepwise Process towards TB Laboratory Accreditation" (scoring = phase 1-4) or SLIPTA/SLMTA for TB (scoring=stars 1-5). (Reference: Laboratory Quality Management Systems Handbook; <a href="http://www.who.int/ihr/publications/lqms/en/">http://www.who.int/ihr/publications/lqms/en/</a> )
<b>2.2.7 Number of GLI-approved TB microscopy network standards met</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>	<b>Notes</b>

<b>Number of standards met</b> as of September 30, 2015	0	N/A	<b>Substantial</b>	CTB in coordination with the NTP (head of the microscopy network) used the GLI checklist to evaluate the number of standards met (0 standards met). This resulted in the development of a workplan in order to address and improve the management of the microscopy network.	This indicator measures whether or not a country has assessed and met the 11 GLI-approved standards for the TB microscopy network. Please send the completed CTB checklist assessing the fulfilment of the requirements for each standard to Mamuka and Claire. In the additional comments column, provide a list of the standards (number only) that are met.
<b>2.3.1 Percent of bacteriologically confirmed TB cases who are tested for drug resistance with a recorded result.</b>	<b>National 2014</b>	<b>CTB 2014</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>	<b>Notes</b>
<b>Percent (new cases)</b> , include numerator/denominator	2.4% (598/24430 )	0.3% (41/13570)	<b>None</b>	The denominator used here reflects the total cases bacteriologically confirmed by sputum smear (first line test of TB diagnosis in use). Numerator represents only those cases that tested for DST from the 3 reference lab. <b>Data presented includes phenotypic DST and genotypic LPA only</b>	This indicator measures the percentage of bacteriologically confirmed TB cases that are tested for drug resistance and also have results recorded in the TB register (disaggregated by new and previously treated cases). Please note that drug resistance testing includes phenotypic (culture DST) and genotypic (molecular DST by GeneXpert, LPA or other molecular technologies).
<b>Percent (previously treated cases)</b> , include numerator/denominator	55.3% (852/1542)	11.1% (77/691)			
<b>Percent (total cases)</b> , include numerator/denominator	5.6% (1450/25972)	0.8% (118/14261)			

3.1.1. Number and percent of cases notified by setting (i.e. private sector, pharmacies, prisons, etc.) and/or population (i.e. gender, children, miners, urban slums, etc.) and/or case finding approach	National 2014	CTB 2014	CTB APA 1 investment	Additional Information/Comments	Notes
<b>Number and percent</b>	58,270  children <15 years 5,778/58,270 (10%);  Prisoners 667/58,270 (1%)  HCW 186/58,270 (0.3%)	27,930/58,270 (48%)  Children <15 years: 3149/27930(11%)  Prisoners: 270/27,930 (1%)  HCW: 51/27,930 (0.2%)  Nampula: 7,236/27,930 (26%) Tete: 3,492/27,930 (13%) Zambezia: 9,881/27,930 (35%) Sofala: 7,321/27,930 (26%)	<b>Moderate</b>	The percentage of cases notified in CTB provinces is at 48%. Out of the 27,930 cases notified in CTB provinces 11% were children <15 years old, 1% were prisoners, and health care workers accounted for the least percentage at 0.2%	The number of TB cases all forms (i.e. bacteriologically confirmed plus clinically diagnosed, new and relapse) should be reported under columns B and C. Under additional information (Column E), give disaggregated data by setting (i.e. private sector, pharmacies, prisons, etc.) and/or population (i.e., gender, children, miners, urban slums, etc.) and/or case finding approach (ICF, ACF, CI). Private sector providers should be described according to context and case finding approach, for example, type of provider targeted (i.e. ,for profit medical clinics, pharmacists, informal providers, private hospitals, etc.)
3.1.4. Number of MDR-TB cases detected	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
Total 2014	482	160	<b>Moderate</b>	The number of MDR-TB cases reported increased from 313 in 2013 to 482 cases in 2014 (NTP report 2014).	Total number of bacteriologically confirmed MDR-TB cases diagnosed. Project should follow the
Jan-Mar 2015	155	N/A			

Apr-June 2015	131	N/A		In APA 1, CTB has supported clinician and MDR TB TOT training in MDR TB provincial focal points in case management where it collaborated with the Global Fund through the NTP and shared costs for the TOT training. Jul - Sept 2015 data is not available	MDR-TB/Xpert algorithm in country regarding whether Rifampicin-resistant TB cases (RR-TB) should be counted as confirmed MDR-TB. If a country's algorithm states that a RR-TB cases is automatically assumed to be MDR-TB (i.e. no further DST required), then RR-TB should be included in the number of confirmed MDR-TB cases diagnosed. Otherwise, RR-TB should be excluded until proven via further DST that the case is a confirmed MDR-TB case.
Jul-Sept 2015					
To date in 2015	286	0			
<b>3.2.1. Number and percent of TB cases successfully treated (all forms) by setting (i.e. private sector, pharmacies, prisons, etc.) and/or by population (i.e. gender, children, miners, urban slums, etc.).</b>	<b>National 2013 cohort</b>	<b>CTB 2013 cohort</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>	
<b>Number and percent</b> of TB cases successfully treated in a calendar year cohort	Getting from WHO	11,012/12,208 (90%) Nampula 3,790/4,153 (91%) Tete 1,089/1,199 (91%) Zambezia 3,008/3,370 (89%) Sofala 3,125 /3,486 (90%)	<b>Substantial</b>	The treatment success rate for 2013 cohort data is at 88% for national level and 90% out of the total cases evaluated in CTB provinces. Data is not disaggregated by population.	Under additional information (Column E), give disaggregated data by setting (i.e. private sector, pharmacies, prisons, etc.) and/or by population (gender, children, miners, urban slums, etc.) and/or risk population groups defined by national policy (IDUs, diabetics, prisoners, etc.). There may be overlap between settings and groups. Disaggregation by risk population is required in

					contexts where Challenge TB is providing treatment support for a specific group according to the annual work plan or in contexts where operations research allows for disaggregation and comparison across groups.
<b>3.2.4. Number of MDR-TB cases initiating second-line treatment</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>The project will support the implementation of CB DOTS in the 4 target provinces given its technical expertise in CB DOTS and the level of investment during TB CAP and TB CARE I. It will also strengthen innovative strategies such as PCA to support the NTP. Supportive supervision visits for monitoring treatment will continue to be implemented.</b>	<b>Notes</b>
Total 2014	482	160	<b>Substantial</b>	All cases diagnosed initiate treatment. Jul - Sept 2015 data not yet available. In APA 1, CTB has supported clinician training in MDR TB case management beginning in 3rd quarter 2015. CTB will continue supporting the NTP by providing technical assistance in training of clinicians on diagnosis and MDR TB clinical management.	The number of bacteriologically confirmed, clinically diagnosed or unconfirmed MDR-TB cases started on second-line treatment during the reporting period. Unconfirmed MDR-TB cases are those awaiting C/DST results. RR-TB may fall under confirmed or unconfirmed depending on the country's MDR-TB diagnosis algorithm.
Jan-Mar 2015	155	N/A			
Apr-June 2015	131	N/A			
Jul-Sept 2015					
To date in 2015	286	0			



3.2.7. Number and percent of MDR-TB cases successfully treated	National 2012 cohort	CTB 2012 cohort	CTB APA 1 investment	Additional Information/Comments	Notes
<b>Number and percent</b> of MDR-TB cases successfully treated in a calendar year cohort	Getting from WHO	26/50 (52%)	<b>Substantial</b>	In APA 1, CTB has supported clinician training in MDR TB case management. CTB will continue supporting the NTP by providing technical assistance in training of clinicians on diagnosis and MDR TB clinical management.	The proportion of confirmed MDR-TB patients successfully treated (cured plus completed treatment) among those enrolled on second-line TB treatment during the calendar year. Under additional information (Column E), as applicable, give disaggregated data by HIV status, and XDR status. RR-TB may fall under confirmed MDR-TB depending on the country's MDR-TB diagnosis algorithm.
5.2.3. Number and % of health care workers diagnosed with TB during reporting period	National 2014	CTB 2014	CTB APA 1 investment	Additional Information/Comments	Notes
<b>Number and percent</b> reported annually	182/44081 (0.4%)	51/19346 (0.3%)	<b>Limited</b>	In 2014, 182 cases were diagnosed with TB out of a total of 44081 HCWs; in CTB provinces, 0.3% TB cases where diagnosed from 19346 HCWs. In APA 1, CTB has supported the development of IC plans in 32 health facilities (CTB provincial officers, in close coordination with provincial health directorates, carried out an assessment of IC in the 32 health facilities and specific IC plans have been developed to address issues related to TB transmission in health facilities).	This indicator measures the percent of healthcare workers (HCWs) diagnosed with TB (all forms) annually (disaggregated by gender and age). This measurement may require a special study using a validated tool and/or methodology.

<b>6.1.11. Number of children under the age of 5 years who initiate IPT</b>	<b>National 2014</b>	<b>CTB 2014</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>	<b>Notes</b>
<b>Number</b> reported annually	17,026	3,149	<b>Substantial</b>	CTB supported in the training of maternal and child health nurses on diagnosis of pediatric TB in all the entry points of health facilities in Tete and Nampula Provinces. CTB in coordination with NTP will continue to support this activity through specific supervision and on site technical support. CTB's CB DOTS volunteers will support by referring index case contacts to health facilities for TB screening	The number of children under the age of 5 years who initiate isoniazid preventive therapy (IPT) during the reporting period.
<b>7.2.3. % of activity budget covered by private sector cost share, by specific activity</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>	<b>Notes</b>
<b>Percent</b> as of September 30, 2015 (include numerator/denominator)	N/A	0%	<b>None</b>		This indicator measures the proportion of CTB project activity budget covered by private sector cost share (if not monetary, will require estimation of costs) by specific activity.
<b>8.1.3. Status of National Stop TB Partnerships</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>	<b>Notes</b>
<b>Score</b> as of September 30, 2015	1	N/A	<b>None</b>	CTB has limited role in this process, this is an activity conducted at the national level	Provide relevant score in line with the indicator definition as presented in CTB M&E framework. Please send a completed CTB questionnaire assessing the status of National Stop TB Partnership to Mamuka and Claire.

8.1.4. % of local partners' operating budget covered by diverse non-USG funding sources	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
<b>Percent</b> as of September 30, 2015 (include numerator/denominator)	N/A	0%	<b>None</b>	No funds were allocated to partners in APA 1.	This indicator measures the proportion of CTB project local partners' operating budgets covered by non-USG funding sources. Please send copies of completed special questionnaires with collected relevant country level data among CTB local partners to Mamuka and Claire.
8.2.1. Global Fund grant rating	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
<b>Score</b> as of September 30, 2015	B1	N/A	<b>Moderate</b>	CTB has actively participated in the technical working group meetings and contributed in development of draft prevalence protocol and budget. TA from KNCV was provided to NTP by Dr. Ellen Mitchel to finalize prevalence survey protocol, specification of equipment and list for procurement. CTB regularly provided technical assistance to FCD (Global Fund/NTP community partner on CB DOTS strategies and led the development of a standard community register for consistence in reporting to NTP on Community indicators (the register is yet to be approved by NTP	Provide the score based on the following: A1 Exceeds expectations A Good performance A2 Meets expectations B1 Adequate B2 Inadequate but potential demonstrated C Unacceptable

<b>9.1.1. Number of stock outs of anti-TB drugs, by type (first and second line) and level (ex, national, provincial, district)</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>	<b>Notes</b>
<b>Number</b> as of September 30, 2015	0	0	<b>None</b>	There were no stockout of anti-TB drugs reported according to NTP but there were delays in the distribution process from the provinces to the districts. However, we have no evidence of stock out at the districts levels.	This indicator should be used to report the number of stockouts of any type of TB drug at any level of the health system that results in interruption of treatment.
<b>10.1.4. Status of electronic recording and reporting system</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>	<b>Notes</b>
<b>Score</b> as of September 30, 2015	0	N/A	<b>None</b>	NTP will pilot ER+R in APA 2	Provide relevant score in line with the indicator definition as presented in CTB M&E framework.
<b>10.2.1. Standards and benchmarks to certify surveillance systems and vital registration for direct measurement of TB burden have been implemented</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>	<b>Notes</b>
<b>Yes or No</b> as of September 30, 2015	No	N/A	<b>Substantial</b>	MEASURE Evaluation conduct a tuberculosis (TB) assessment in 2014, CTB supported NTP in the revision and reproduction of revised tools and registers based on WHO Guidelines of new case definition. CTB is collaborating with NTP and other partners in the training of districts TB supervisors and district lab supervisors by facilitating the trainings.	If assessed, please save a copy of the report/document assessing the status of relevant standards and benchmarks on the owncloud or send to us. In the additional comments column, include the country standards and benchmarks score (and year of completion) if an assessment was done.

10.2.6. % of operations research project funding provided to local partner (provide % for each OR project)	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
<b>Percent</b> as of September 30, 2015 (include numerator/denominator)	N/A	N/A	<b>None</b>	CTB did not carry out operational research in APA 1	This indicator measures the proportion of <b>Challenge TB-supported</b> operations research project funding provided to local partner(s), by each OR project.
10.2.7. Operational research findings are used to change policy or practices (ex, change guidelines or implementation approach)	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
<b>Yes or No</b> as of September 30, 2015	N/A	No	<b>None</b>		Under additional information (Column E), please present relevant information for each individual project. Please send relevant special reports with qualitative details to Mamuka and Claire.
11.1.3. Number of health care workers trained, by gender and technical area	CTB APA 1		CTB APA 1 investment	Additional Information/Comments	Notes
			<b>Substantial</b>	TOT training was provided on MDR TB and pediatric TB to clinicians, MDR TB focal points, technicians, maternal health nurses and TB nurses. Those who benefited from the TOT training are expected to do a cascade training for districts level mother and child nurses/pediatric ward nurses/pediatric consultation rooms nurses	Please note that healthcare workers includes health facility staff, community health volunteers, laboratory staff, sputum transport technicians, and community-based DOTS workers. Below, please give disaggregated data by gender and sub-objective. Training includes any in-person, virtual, or on-the-

	# trained males APA 1	# trained females APA 1	Total # trained in APA 1	Total # planned trainees in APA 1	job training that is longer than half a day and for which curriculum is available. This indicator is interchangeable with 'Number of individuals trained in any component of the WHO Stop/End TB Strategy with USG funding', which USAID missions may have as a requirement for internal agency reporting.
1. Enabling environment	0	0	0	N/A	
2. Comprehensive, high quality diagnostics			0	N/A	
3. Patient-centered care and treatment	175	152	327	384	
4. Targeted screening for active TB			0	N/A	
5. Infection control			0	N/A	
6. Management of latent TB infection			0	N/A	
7. Political commitment and leadership			0	N/A	
8. Comprehensive partnerships and informed community involvement			0	N/A	
9. Drug and commodity management systems			0	N/A	
10. Quality data, surveillance and M&E			0	N/A	
11. Human resource development	25	19	44	58	
CB DOTS training for Community health workers	0	0	0	740	
Other			0		
<b>Grand Total</b>	<b>200</b>	<b>171</b>	<b>371</b>	<b>1182</b>	
<b>11.1.5. % of USAID TB funding directed to local partners</b>	<b>National APA 1</b>	<b>CTB APA 1</b>	<b>CTB APA 1 investment</b>	<b>Additional Information/Comments</b>	<b>Notes</b>
<b>Percent</b> as of September 30, 2015 (include numerator/denominator)	N/A	0% (0/800000)	<b>None</b>	no funds were allocated to partners in APA 1 as sub-awards were not signed. The amount has been carried over to APA 2	This indicator measures the proportion of CTB annual funding directed to local partners.

## Annex II: Status of EMMP activities

Year 1 Mitigation Measures	Status of Mitigation Measures	Outstanding issues to address in Year 2	Additional Remarks
Training of lab technicians in airflow check and general cleaning of equipment and regular maintenance will be guaranteed to make sure the structure fans in the VWS are functional.	Monitoring has not taken place because the activity was cancelled	None	
Proper training of CHW in sputum transportation, provision of transportation kits until the lab where after use of the sputum containers are destroyed based on procedures for disposal of waste from the WHO Manuals "laboratory Biosafety Manual" and the WHO Manual "Safe Management of Wastes from Health Care Settings".	Monitoring has not taken place as training for CHW, including provision of transportation kits will take place in APA 2.	Activity to be implemented in APA 2	
Review of project plan for compliance with conditions prior to implementation	Monitoring has not taken place	Activity to be implemented in APA 2	Mapping of laboratory coverage CTB provinces completed.  4 HF identified to benefit from small scale rehabilitations in APA 2